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ABSTRACT

This document reports the proceedings of a research forum on vocational training. Following an introduction that outlines the course of the meetings, the following 13 papers are included in the proceedings: "Report by the National Employment Office (ONEM)" (Belgium); "Training Research and Development" (National Manpower Service, Belgium); "Vocational Teacher Training--Current Features of Research and Development Work" (Denmark); "Report on the Activities of the Federal Institute for Vocational Training" (Berlin/Bonn); "Report on Research by the Centre d'Etudes et de Recherches sur les Qualifications" (Paris); "Progress Report on Summary of Investigations and Activities" (Institute for Technological Education, Athens); "Summary of Major Research and Development Projects" (Training and Employment Authority, Dublin); "Report on Training Development in Italy" (Istituto per lo Sviluppo della Formazione Professionale, Rome); "Report of the Chamber for the Promotion of Craft Trades in the Grand Duchy of Luxembourg"; "Current and Recently Completed Research in the Netherlands" (Vocational Education Research and Support Centre and State University of Utrecht); "Report of the Institute of Employment and Vocational Training" (Lisbon); "National Research and Development Projects" (National Employment Institute, Spain); and "Government Sponsored Research and Development in Vocational Education and Training in the United Kingdom" (Training Commission, Sheffield). A list of conference participants is included in the report. (KC)

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PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

CEDEFOP
Centro europeo para el desarrollo de la formación profesional
Det Europæiske Center for Udvikling af Erhvervsuddannelse
Europäisches Zentrum für die Förderung der Berufsbildung
Ευρωπαϊκό Κέντρο για την Ανάπτυξη της Επαγγελματικής Κατάρτισης
European Centre for the Development of Vocational Training
Centre européen pour le développement de la formation professionnelle
Centro europeo per lo sviluppo della formazione professionale
Europees Centrum voor de Ontwikkeling van de Beroepsopleiding
Centro Europeu para o Desenvolvimento da Formação Profissional
Bundesallee 22, D-1000 Berlin 15,
Tel. (030) 88 41 20; Telefax (030) 88 41 22 22; Telex 184 163 eucen d

CEDEFOP
BERLIN
1988

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INTRODUCTION

1.
The fourth meeting of the CEDEFOP annual research Forum took place at CEDEFOP on 13 and 14 September 1988, with representation from all the twelve Member States of the European Community. The research organizations represented all have a role to play in advising governments on vocational training and re-training policies and strategies. They also have a role in research and development on continuing education.

In keeping with the usual preparations for the Forum, the organizations had submitted short summaries of their research activities and future plans, most of which were distributed before the meeting. Also available to the participants were two reports, one entitled "Workforce 2000" which is a scenario project carried out by the Hudson Institute for the United States Department of Labour, and another paper entitled "Vocationalism and the Japanese educational system".

Although it was not possible for all the research organizations to follow the numbered sequence of research and development topics sent out in the CEDEFOP guidelines for the preparation of the research reports, the main subject headings for discussion were as follows:

1. TRANSITION SCHOOL TO EMPLOYMENT
2. TRAINING FOR THE LONGER-TERM UNEMPLOYED
3. TRAINING FOR NEW TECHNOLOGY
4. USE OF NEW TECHNOLOGY IN TRAINING
5. TRAINING OF TRAINERS
6. TRAINING CURRICULUM DEVELOPMENT
7. EVALUATION METHODS
8. TRAINING FOR THE MANAGEMENT OF TECHNOLOGICAL CHANGE
9. OTHER IMPORTANT RESEARCH AND DEVELOPMENT PROJECTS NOT IN THE CEDEFOP LIST
10. FUTURE RESEARCH AND DEVELOPMENT PRIORITIES

A new feature of the meeting was a presentation on scenario projects on training and qualification requirements to the years 1992, to coincide with the target date for the establishment of the internal market, and to the year 2000. Scenario reports had been received from the Federal Republic of Germany, France, Denmark, Greece (West Attica) and the United Kingdom. A contract had been given to a researcher in the United Kingdom who analyzed the various scenario contributions, pointing out the main common causes for concern and similarities in the methodologies used. The results of this analysis were presented in the form of a synthesis report at the meeting. Further details on the projects appear below.

As was to be expected, not all of the organizations represented were working on all of the numbered subjects and further information on the selection of these activities is also given below in the flash.

2. The objectives of the meeting

In addition to the presentation of brief updates on the summary reports on research and development activities previously submitted, part of the meeting was devoted to more in-depth presentations on the following subjects:

- the EuroTecnet project
- future perspectives - some Member States scenarios on training and qualification needs to the years 1992 and 2000
- the training and qualification implications of the internal market
- CEDEFOP guidelines for the period 1989 to 1992
- Commission report on the "observatoire" on changing occupations.

Dr. Piehl, Director of CEDEFOP, opening the fourth Forum for research and development organizations, welcomed the participants and gave a short introductory speech in which he emphasized the importance of the research Forum and the exchange of the national research summary reports.

Continuing, Dr. Piehl said that the emphasis in the reports and at the meeting should be on research activities of a new or innovative nature and should not be concerned with details on past work or the setting up of new training centres and training programmes.

He also stressed the value of the CEDEFOP role in providing a platform for the exchange of information and ideas and said that the Forum meeting also provided an opportunity for CEDEFOP staff to present information on CEDEFOP's four-year perspective and annual work programmes.

He noted with satisfaction that all twelve Member States had been able to submit reports in time for the meeting and all twelve Member States were represented. Dr. Piehl also extended a special welcome to the Chairman of the Management Board, Mr. Koelink and to Mrs. Theunissen and Mr. Brumhard, who are both vice-presidents of the Management Board.

Mention was also made of the project on the collection and the first evaluation of training and qualifications scenario documents which have been received from six of the Member States and was to be the subject of a presentation at the meeting. Further details on the scenario work are given later in this flash.

3. Information on current work of CEDEFOP, the Commission and at national level

3.1

E. Retuerto, Deputy Director of CEDEFOP, presented up-to-date information on CEDEFOP's work programme for 1988 and said that we were now in a process of preparing the 1989 work programme. The programme still had to be discussed with the Management Board and receive its approval in consultation with the Commission. The meeting of the research organizations at the forum was very helpful to CEDEFOP in drawing up its work programme and in ensuring its usefulness to the appropriate organizations in the Member States.

In his introduction, E. Retuerto laid emphasis on three activities - the comparability of qualifications, the training of trainers and the development of the research forum which would be receiving special attention.

Continuing with the introduction to CEDEFOP's work, C. Politi, Deputy Director, stressed the importance of the development of the information and documentation network and the creation of databanks which would allow quick updating of information and access to it.

On the subject of small and medium enterprises training, Mr. Politi underlined some of the CEDEFOP work activities in this field and commented that at the moment there was no management development training strategy for small and medium enterprises at Community level.

The study visits programme for the exchange of senior training personnel continues to make progress and it was envisaged that some 350 experts would be enabled to take advantage of this Commission programme which is administered by staff at CEDEFOP.

PERMANENT CEDEFOP ACTIVITIES

1. Information and documentation
2. CEDEFOP publications
3. Up-to-date descriptions of the systems of vocational training and a comparative guide, in particular on the role of the social partners

4. Comparability of vocational training qualifications in EC Member States
5. Study visits for vocational training specialists
6. Forum for national research institutes engaged in the field of vocational training

3.2

Commission

Mr. T. Mawson, representing DGV of the Commission of the European Communities, gave short presentations on the following subjects:

EuroTecnet programme

- Training implications of the internal market
- Observatory on occupations.

On the subject of the EuroTecnet programme, Mr. Mawson said that the new phase of the programme would emphasize exploitation and improvement of actions, the extension and transfer of methodologies, strategic planning vis à vis the internal market, and pro-active development of venture training. Proposals are being developed with the national policy coordinators of the EuroTecnet programme, for discussion in the Advisory Committee on Vocational Training in December 1988. A decision on this new programme is expected in 1989.

On the training implications of the internal market it was said that the European Council had called for accelerated work on the recognition of vocational training qualifications in view of the need for freedom of movement and establishment in the internal market. In the promotion of economic and social cohesion in the Community, mention was made of the doubling of the structural funds to help underdeveloped regions, those regions in crisis and rural and agricultural areas. The situation of the long-term unemployed, and young people in need of training was also underlined. There was also a need to improve the overall level of training for all workers and the establishment of better links between enterprises and the education and training systems.

On the European observatory on occupations, Mr. Mawson said that one of the aims here was to improve the information flow on occupational development with internal market conditions in view, covering occupational and geographic mobility. He went on to say that the methodology for an experimental phase on information technology professions was now ready and that a contractor for an information technology survey would be chosen by October this year to coincide with the launch phase of the observatory in November.

The methodology agreed concentrates on functions actually carried out rather than formal job descriptions or qualifications. Surveys would be carried out in the Member States to describe the whole scene affecting information technology occupations (Labour market, working conditions and qualifications etc). The final report on this project is due May or June 1989 for widespread distribution throughout the Community as a first phase of the observatory project.

3.3
Main current research activities at national level

As in previous years, there is a strong continuity in the work being done, with varying degrees of priority allocated to the subjects. The transition from school to employment continues to be a matter of great concern and activity in all Member States, but with an increasing emphasis on follow-up studies of cohorts of young people who have left school to examine the types of jobs they have obtained and whether or not their qualifications were indeed relevant to their employment opportunities.

Under the heading of transition school to employment, there is also some activity on the training of secondary school teachers in the art of careers counselling. The development of observatories to examine various aspects of the process of transition from school to work and changing training and qualification needs is an increasingly strong feature in some of the Member States, in support of the Commission's project on the observatory on changing occupations. Experimental programmes in schools and training centres to match more closely the real needs of the target audiences, often based on alternance training systems, are being introduced in some Member States in order to improve the job prospects of the young trainees. Projects for the training and re-training of long-term unemployed adults again feature strongly in the presentations, reflecting the growing concern about decline in the numbers of young people coming onto the labour market and the increasing importance of re-training long-term unemployed adults to re-enter the labour market.

The common themes appearing in the reports can be listed as follows:

- training of young people for transition from school to employment with increasing emphasis on follow-up studies
- evaluation techniques for training programmes
- improving provision for the training of trainers
- adult training and re-training measures including development of financial support schemes during the training periods
- the development of training curricula
- the development of training media including the use of new technologies in training situations
- the evaluation of teaching techniques and learning methods
- labour market and vocational training supply studies
- projects related to the training of managers
- projects on equal opportunities of access to training programmes.

There is a general trend towards more forward-oriented work and increasing emphasis on longitudinal studies. The further development and application of new technologies in learning situations continues to receive increasing attention and some organizations are trying out expert systems despite their present limitations, which research and development staff expect to overcome in the near future.

3.4
Research and development projects not shown on the CEDEFOP list

Under this heading, the FAS reports a study of the manpower and training needs of the chemical industry, completed in 1987. The study took place over a three-year period and investigated almost 300 companies. The final report, recently published, reviews the chemical and allied products industry in Ireland and outlines the current developments. Training recommendations from technical to management levels are made for this sector of industry, based on the research findings.

One project, based on the description of skill requirements and continuing training opportunities for persons employed in extra hospital health and social care activities, is intended to develop a recommendation for designing a continuing training concept relating to work in a community social centre.

Another project is examining the financial cost of training in new technologies; the objective here is to determine the nature and scope of training in selected new technologies in the technical/industrial field and the additional costs incurred thereby, and also to investigate the material and financial inputs required for training in selected new technologies in multi-company training centres on the basis of corporate experience.

In the United Kingdom, a comprehensive review of arrangements for the funding of vocational education and training in Britain has now been completed, with a series of reports shortly to be published, making recommendations on how the current mechanisms for funding might be improved.

Training in the management of technological change, for example, in Belgium has seen the development of advanced courses for managers, which are becoming increasingly popular and include modular options whose elements include problem-solving linked to the introduction of new management techniques and methods into companies.

On the subject of training of trainers, the Danish organization SEL is carrying out a research project on the qualifications of teachers in technical schools. The objective of this particular study was to find out about the formal and the informal qualifications amongst teachers in technical schools, and to learn about their experiences and development potential. The project consists of three parts, a questionnaire which received 500 replies and have been entered in a computer, a follow-up survey which consisted of 5 open questions, which was answered by about 450 teachers, and an interview round with 30 selected teachers, who were interviewed on the lines of a semi-structured interview guide. The results of the project show that a relatively large group of technical school teachers have a continuing training or long-duration training, that the majority of the teachers maintain contact with industry after taking up positions as technical school teachers and that their priorities are geared towards professional orientation rather than the pedagogical psychology, that the majority of teachers take part in other pedagogical activities at the school, other than traditional class and workshop training. 25% of the teachers researched, however, felt that there was little or no scope for expanding, developing or renewing themselves within the school. A large number of the teachers regard the future-oriented qualification demand as including flexibility, problem-solving, cooperation, creativity and professional competence as self-evident, but the teachers have not themselves suggested what the new future-oriented qualifications can open up.

4. Future research and development priorities

Under this heading, the range of future research and development priorities is very varied and includes activities on the implications of information and communication technology for work organization and training responses. For example, the question is raised, if the introduction of information and communication technology and its application in work processes calls for a restructuring of further occupational fields and occupations and whether or not new occupations will emerge. Another point that is raised concerns training in and application of multi-disciplinary skills which raises the question of the role of multi-disciplinary skills in work and processes of today. Training needs and training in environmental protection are also listed as future research and development priorities covering questions such as what training should be provided within environmental protection in order to identify or apply new technical and economic solution approaches. Changes in the significance of work, occupation and learning, are also being addressed under this heading, raising questions regarding attitudes towards vocational training, changing in the light of rapid devaluation of pre-existing knowledge resulting from subsequent new and additional training. Research on occupations, for example in Italy, is based on a body of research and experimental work on occupational trends, skills, categories of occupations and the problems of innovation. Future R and D priorities in the United Kingdom, for example, include work to assist with the establishment of a coherent national framework of standards-based vocational qualifications in liaison with the National Council for Vocational Qualifications. The establishment of the two-year youth training scheme as a high quality training programme which is the normal means of entry into working life for sixteen and seventeen-year-olds is also included under this heading. Other priorities include helping to build a self-sustaining and responsive training infrastructure supported by effecive local education, training and employers' organizations. Finally, work to identify and help industry to meet emerging and increasing key skill requirements is also featured under the future R and D priorities heading.

Some of the work mentioned under this heading is also expressing concern with the employment and qualification implications of the establishment of the internal market in the year 1992.

5. Notes on other presentations and discussions

Scenario reports on future training and qualification requirements to the years 1992 and the year 2000 had been received from Germany, the United Kingdom, Denmark, France, Greece and Ireland. A synthesis report on the six scenario studies was presented at the Forum meeting by Mr. A. Rajan, who said that most of the scenarios had relied heavily on mathematical modelling techniques and interviews with experts. The methodologies used were very varied and it was considered that no single methodology was entirely reliable by itself. Whilst mathematical modelling could provide a framework for scenario exercises, the researcher considered that there had to be a combination of methods including surveys to be carried out in companies of varying sizes in selected sectors.

Subject to some corrections to be ready by 15 October, the first synthesis report on the scenario exercises will be ready by the end of this year.

A trend towards a demand for higher education and training qualifications and an increase in so-called knowledge or information workers was already discernible from the various scenarios and it was considered that this trend was likely to continue. It was pointed out by participants, however, that very large numbers of employees would still be engaged in fairly traditional occupations which would continue to be of key importance for the foreseeable future and would require appropriate, adequate, high-quality training facilities.

For the first time, the Forum was addressed by the new Director of the National Center for Vocational Education and Research at the University of Ohio, Dr. R. Ryan, on the subject of education and training development and future perspectives in the United States of America. As with the situation in the European Community, the demand for continuing and higher education was increasing rapidly in response to uncertain employment prospects, particularly with regard to the spread of new technologies. Increasing attention is now being paid also to the basic educational subjects such as mathematics, science and English Language, which had become rather neglected over the past few years when the emphasis was on investing in new technology skills.

6. Conclusions and suggestions for future action

The participants were informed that exchanges of research personnel between the BIBB, CEREQ in France and with Austria and the National Center for Vocational Education Research at Columbus, Ohio were being developed and it was suggested that the exchange of vocational training research personnel should be encouraged within a European Community context. The possibility of some vocational training research personnel being included in the already established study visits programme for vocational training experts will be considered. Short, familiarization visits between vocational training research personnel are considered to be valuable as a first step towards longer attachments for work on specific projects ending with a definite result.

In his closing remarks, Dr. Piehl asked the participants to concentrate on forward-oriented research in their summary reports for the July Forum meeting in 1989.

The final version of the synthesis report on the scenario papers received from six of the Member States to date will be revised in the light of comments at the meeting and be available in its final form before the end of the year. Those countries which had not submitted scenario material to CEDEFOP would be requested to do so by 15 October for inclusion in the CEDEFOP scenario exercise.

Dr. Piehl said that the next Forum would take place on 3 July, followed by a two-day meeting on the scenario exercise on 4 and 5 of that month. He explained that the aims of the CEDEFOP scenario exercise were limited to three main points:

- to provide greater transparency between the various scenario exercises from the EC Member States and other interesting countries
- to consider the possibility of devising a common methodology for scenario exercises on a European level
- to consider the possibility of creating a European Community scenario on the future qualification and skill requirements of the internal market for 1992 and for 2000.

A working party of external experts nominated by the government members of the CEDEFOP Management Board will be set up to develop the scenario exercise and to help to plan the scenario presentations on 4 and 5 July 1989. Requests for nominations to the working party have already been distributed to the CEDEFOP Management Board members concerned. The first meeting of the external working party, together with experts from CEDEFOP, is planned for 15 and 16 December this year.

Dr. Piehl thanked the participants for sending their summary research reports, for their participation at the Forum and their interest in the development of the scenario project.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

REPORT BY THE NATIONAL EMPLOYMENT OFFICE (ONEM)
BELGIUM

CEDEFOP
BERLIN
1988

Forum of national institutes conducting research and development on vocational training

Report by the National Employment Office (ONEM), Brussels, by Dr. P. Debaty, Technical Adviser

It should be noted firstly that ONEM is not itself an institute which conducts research on employment and vocational training. Its position at national, community and regional level, its joint management system and its role as the coordinator of a large number of cooperation schemes give it, however, a central position in much of the research and study being conducted to develop vocational training projects in Belgium.

These concern the French and German speaking populations of the country (Brussels and Southern Belgium).

As in neighbouring countries, there are two main lines of study and research:

- developing a labour market which is accessible to young school-leavers;
- firms' needs for a skilled labour force enabling them to prepare for the single market in 1992 and thereafter.

The works discussed below are categorized in the conventional way:

1. Transition from school to work: the main concerns of

the public authorities as regards the transition of young people from school to work can be seen from the studies and research being conducted on the skills which are expected now and in the future.

Today:

a. The balances of employment supply and demand are analysed on the basis of employment and unemployment statistics and the trends in numbers leaving the different types of school. These studies involve various Ministries although a genuine "monitoring unit" is still a future project of the Ministry of Employment and Labour.
b. Specialized surveys are conducted in various sectors (building, textiles, graphic arts, services) on the basis of direct contacts with firms. These surveys are conducted by company federations or the National Employment Office.

Tomorrow: there are few exploratory studies of anticipated trends in skills. The French Community Ministry, using the model set up by Professor Prigogine in the field of the exact sciences, is developing research based on statistical trends intended to pinpoint the skills which will be demanded in future years. The initial findings are expected at the end of 1988.

As regards the transition from school to work, the change some years ago from full-time compulsory education to the age of 16 to full-time or part-time compulsory education to the age of 18 in Belgium has led to the creation of alternance training systems administered by:

- Ministry of Education: the Centres d'enseignement à horaire réduit (CEHR - part-time teaching centres), where trainee time is split between school and a firm or a training system set up within a practical framework.
- Ministry of Employment and Labour in combination with the Community Ministries (French or Flemish speaking): these systems include:
  - industrial apprenticeship: modelled on the apprenticeship system of the Ministry of Small Traders in education or in approved centres;
  - employment/training contracts: an alternance training system based on applications in neighbouring countries and implemented by firms in certain sectors (for instance metal-working). Numbers involved are not very large (some 150 employment/training contracts in March 1988).

These innovations are giving rise to a number of major publications which look at projects put into practice. This research comes largely from the company federations, since the FEB (Federation of Belgian Industry) has launched a campaign to promote cooperation on training between training agencies and firms. Examples are provided by a number of the programmes and programme evaluations of the CPEs (Job advancement centres) of FABRIMETAL set up to train manual workers and extended some months ago to employees.

"Challenge J", is both a campaign to inform firms about the employment and training of young people and an FEB document setting out the initial results of this campaign.

2. Training of the long-term unemployed: the long-term unemployed are defined as people who have been drawing unemployment benefits for two years or more.

Young people are the only section of this group which has been studied in detail in Belgium (problems linked to other factors such as age, sex and under-qualification are intrusive in other cases). This means that measures and any preceding or subsequent research are always linked to the problem of transition from school to work which is dealt with in the preceding section.

The other measures have a legal aspect (early retirement, part-time employment, adaptation of working hours) which has little connection with the problem of training.

It should be noted that special efforts have been made in the area of information and reception facilities in 1987-1988, but it is still not known for sure whether this will continue.

3. Training in the new technologies: it must be pointed out firstly that the term "new technologies" can no longer be applied to basic apprenticeships in computing and its simple applications since these are now

widespread. The networking, however, of the computer systems of 15 ONEM training centres in Brussels and the Walloon region has entailed a number of preliminary studies which have led to new programmes and deal with both hardware and software (including spreadsheets).

These include:

a. Computer-assisted design: aimed at mechanical engineering and building draughtsmen using AUTOCAD software. Duration: 4 weeks. Cooperation has been set up with teaching establishments for high-level users.

b. Programmable automatic systems: selection is based on skill in converting diagrams into automatic language. Programmes include logic, GRAFCET circuit reasoning, LASDER and automatic systems networks. Duration: 9 weeks.

c. Numerical control machines: training of operators/ setters (6 weeks) and ISO system programmers (6 weeks). Evaluation by practical work on simulators and then on numerical control machines.

d. Impact of informatics and office technology on firms: is aimed at middle and senior company management and follows on from an "innovation management" seminar. Duration: 5 days.

e. Review of the potential of expert systems and artificial intelligence in firms: is aimed at managers and computer scientists. It includes an introduction to the languages LISP and PROLOG and follows on from the "innovation management" seminar.

Duration: 5 days.

A large number of other developments in the areas of robotics, biochemistry, the study of composite materials, etc., could be mentioned. Most of these projects have given rise to publications by ONEM or by one of the 40 or so public or private training agencies cooperating in this training.

4. Use of new technologies in training: An Open Learning Centre will be inaugurated in 1988 in Brussels on one floor of an important building. This self-training centre will use CAI and audiovisuals with software focused on a wide range of subjects (languages, accounting, management, etc.) and is aimed at the staff of SMEs.

This "open" training system is already being used, however, on a permanent or experimental basis, in other activities such as:

a. the use of specific software for apprenticeships in the fields of insulation, lathe work, milling, etc., for the training of site supervisors. Parallel use is being made of audiovisual aids.
b. apprenticeship in author's languages (particularly TENCORE) for writing CAI courses: management courses for self-employed craftsmen, analytical accounting courses, courses in technical English and in political economy, etc.
c. combined use of CAI courses and videodiscs for the

preparation of educational software on various subjects. This largely involves work which is at an experimental stage and which should provide initial results at the end of the year.

d. use of business games or business simulations: in particular the business game MENAKO produced entirely by accountant trainers which reproduces the accounting life of a firm throughout a financial year.

Cooperation between public and private training agencies is increasing greatly in these activities, given the high cost of the "human" investments to be made.

5. Training of trainers: specific responsibility for the training of trainers lies with specialized agencies, whether public (for instance CNFEP at ONEM or FOPA at the University of Louvain) or private. These agencies are also cooperating with centres which organize training as regards projects aimed specifically at the trainers of these centres.

Most of the schemes discussed in sections 3 and 4 above have entailed and are entailing parallel training schemes for trainer users. The networking of the 14 training centres spread throughout Brussels and the Walloon region has been accompanied by specific training given partly by the manufacturer (KIENZLE) selling the specific software and partly by those in charge of the computer centre with help from outside consultants.

Over and above training linked to programmes involving the new technologies, the idea of "quality clubs" (overall quality for example) has also had an effect on course development.

CAI methods and, in general, programmed instruction are also giving rise to schemes orientated towards the technical aspects of scenarios: definition of content, choice of methods, follow-up of production teams.

More "traditional" methods have not, however, been abandoned, particularly those enabling trainers to improve the teaching relationship.

In this area, "microteaching" schemes are being organized by the CNFEP, while "communication" schemes, set up initially for company personnel, are being requested by trainers.

These schemes, whose interest is highlighted by the various surveys discussed above (section 1), have initially brought together trainers of centres and company managers.

The programmes of these schemes, influenced in some cases by sociological aspects and in others by aspects of computer science, should give rise in 1988 to integrated developments.

6. Development of training programmes: the previous

sections relating to new technologies largely cover the new programmes. Special mention should perhaps be made of distance learning via State or community television channels (particularly cable).

Two examples:

a. a course in Dutch (which began in 1987): "Spreek met ons mee" including 36 14-minute programmes (on national television in 1987 and cable in 1988) and accompanied by audio cassettes and a written syllabus. This distance learning course is supplemented by locally organized conversation groups led by a tutor.

b. a course on "short-term loans" including 7 24-minute programmes (to inform the managers of SMEs) with recapitulative syllabuses and exercises. Produced with NO TELE, a community television channel in Tournai, this series will come on the screen in September 1988.

7. Methods and evaluation:

a. A differentiation can be made between individual and project evaluation. The first category includes the special methods developed by ONEM's Centres d'Orientation et d'Observation (Orientation and Observation Centres) to help jobseekers to evaluate their personal and vocational skills and their motivation in a formative and permanent way with a view to orientation, training, redeployment or a job.

b. As regards projects to be carried out, these centres have also developed a system for evaluating training agencies able to carry out, whether alone or in cooperation, projects with particular target groups (particularly as regards remedial education).

c. In the case of projects carried out, the computerization of centres makes it possible, by means of appropriate software, developed locally, to evaluate achievement levels and break them down as a function of objectives pursued and costs. These statistics show, on one hand, placement rates in the case of jobseekers and, on the other hand, training aims in the case of company personnel.

d. A wider-ranging evaluation of the perception which firms have of training and training agencies was dealt with in a micro and macro study conducted by SOBEMAP at the request of the French Community Ministry.

8. Training in managing technological change: advanced courses aimed at managers which are becoming increasingly popular include modular options whose elements include problem solving linked to the introduction of new management techniques and methods into companies. Some examples of these have been discussed above.

Special mention should perhaps be made of the module which precedes the robotics, office technology and computerized management options. There is now a craze for this module, called "innovation management", which started off very slowly two years ago. It is carried out in cooperation with university teachers (Mons and Brussels). It lasts 5 days and uses the case study method (anticipating the need for change - managing the change).

Other modules are more specific, for instance the "robotics" (CIM: computer-integrated manufacture) module covering the wholesale computerization of operating tasks in industrial production.

It lasts 5 days and is aimed at managers, engineers and computer scientists working in industry.

9. Other important projects: mention should be made of other projects being developed or already put into practice. These include the specific training schemes for the staff of SMEs. A course in management for self-employed craftsmen using CAI has already been mentioned. This is in fact part of an alternance programme for SME managers: 6 weeks of theoretical training and 10 weeks of practical training in an SME.

This programme is being run in parallel with a training scheme for business creators: 5 to 15 Saturdays designed to inform trainees and including project evaluation (for 60 to 80 trainees), then 6 weeks of theoretical training for the leaders of "feasible" projects (for 12 to 16 people), all with follow-up and guidance to help the trainee with his project.

These activities have given rise to a number of publications and reports.

10. Future "research and development" priorities

The key development areas for vocational training are not defined in detail in the French community in Belgium, since the aim is to achieve both quantity and quality. The concern to provide training in advanced skills and to meet firms' needs for high quality staff can, however, be pinpointed.

In this area, cooperation with the firms concerned is taking the form of formulae in which schools or centres are alternated with on-the-job training.

The problem of the thousands of young people leaving school with no qualifications is leading to the establishment of many forms of cooperation between various training agencies and the use of distance learning and computerized aids.

1988 is a year of transition for the Belgian public authorities who view the advent of 1992 with concern.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

TRAINING RESEARCH AND DEVELOPMENT
NATIONAL MANPOWER SERVICE
(RIJKSDIENST VOOR ARBEIDSVOORZIENING, RVA)

BELGIUM

CEDEFOP
BERLIN
1988

Project 6

1. Name of the project and institution
Experimental part-time education and the ESF project "Alternance learning for those in compulsory part-time education" in Flanders; Hoger Instituut voor de Arbeid (Higher Institute of Labour).

2. CEDEFOP category
Transition from school to work

3. Nature and objectives of the project
Experimental part-time education was introduced in 1984 as an optional form of education for 15-18-year-olds affected by the raising of the school-leaving age in 1983. Ninety schools - 48 of them Dutch-medium institutions - were designated centres of part-time education with the job of providing general and vocational education spread over 12-15 teaching periods per week. The schools in question are experimenting with new educational methods more adapted to the needs of their target group.

The ESF project on alternance learning was set up in 1985 in the framework of part-time compulsory education. For a period of one or more academic years youngsters' part-time school-based education is complemented by part-time employment in the course of which they receive industry-based training. Employers are paid a grant for this purpose. In this way it is hoped to develop an attractive form of education for the youngsters in

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- a telephone survey covering major employers in the financial and vehicles sectors,
- two case studies (interviews with leading figures and a survey of users, i.e. course participants).

7. Evaluation of method and result
The methods used enabled a general picture to be built up of the use of computer-aided instruction in industry. The results were summarized in a research report covering the following:
- definition and scope of the project,
- management policies on training and computer-aided instruction,
- computer-aided instruction in a vehicle-assembly plant,
- computer-aided instruction in a financial institution.

The changes taking place in the use of computer-aided instruction in industry attention are explored in sections devoted to the history of CAI, motives for its introduction, its integration into the overall training process, practical organization, the reactions of employees and prospects for the future.

question which both increases their motivation as students and improves their job prospects by providing a form of training more closely geared to employment. In a number of sectors this project has provided an opportunity and an encouragement to develop the industrial training contract approach which was given a statutory basis in 1983.

4. Target group

The target group for experimental part-time education comprises those 15-18-year-olds in the lowest (vocational) grade of secondary education who no longer attend (or wish to attend) school full-time, i.e. those who would formerly have been seen as early leavers and who no longer profit from full-time schooling.

While all youngsters in experimental part-time education are eligible to take part in the ESF project, participating firms' role in their selection means that the "better" youngsters tend to be chosen. In the first two years the project was developed in four sectors (textiles, clothing, metal industries and construction); in 1987-8 it is being extended to mining, foodstuffs, hotel and catering services, timber industries, distribution, laundry services and agriculture and horticulture.

5. Duration

Experimental part-time education: 1984-1988.
ESF project "Alternance learning for those in part-time compulsory education": 1985-1988.

6. Methodology

The study of experimental part-time education involves the compilation of profiles of both the youngsters and the centres taking part. Overall records are compiled each year to provide a profile of the participating youngsters, while in 1985-86 a sample of participants were interviewed in depth to provide qualitative information. The centres' functioning is charted by means of written questionnaires aimed at the teams running the scheme.

The study of the ESF project comprises the analysis of the profiles of the participating youngsters, schools and firms together with a description and evaluation of the industry-based training and alternance learning. The educational and employment effects are being examined in a final phase using appropriate survey techniques and involving youngsters, coordinators, employers and workplace supervisors.

A review of the literature on initiatives in the area of young people's transition from school to work in five western European countries is currently underway with a view to an international publication on this topic. French, Dutch, West German, British and Belgian training and employment policies for 15-18-year-olds with a low level of education are being analysed with the aim of formulating recommendations for Belgian policy in this area.

Project 7

1. Name of the project and institution

Alternance learning projects; Hoger Instituut voor de Arbeid (Higher Institute of Labour).

2. CEDEFOP category

Transition from school to work

3. Nature and objectives of the project

3.1. Objectives

- Helping to reduce youth unemployment.
- Easing the school-to-work transition for members of the target group.
- Encouraging and strengthening links between educationists and employers.

3.2. Description

The raising of the school-leaving age in 1983 and the second programme of action of the European Community (youngsters' transition from school to work and adulthood) were the immediate background to the introduction of an alternance training system in the provinces of West-Vlaanderen and Limburg. In this context alternance training was taken to mean the coupling of part-time vocational and general education with real - i.e. paid - work experience, in a partnership involving notably employers (particularly in the metal industries, textiles and welfare sectors), technical colleges and certain training institutions. The aim was to secure an immediate improvement in the participating youngsters' employment prospects; the employers were expected to take on the youngsters wherever possible on completion of their course.

4. Target group

Initially the target group comprised 16-25-year-olds who had gone through one or other form of higher secondary education, with the stress - given the introduction of part-time compulsory education - on the 16-18 group. In the course of the project there was a shift towards an older (18-25) and more highly educated target group (with many participants coming from higher technical schools) resulting from the new part-time compulsory education and the admission criteria set by employers. In the penultimate year there was a further change: higher technical school graduates could no longer enrol, and the stress was placed on the welfare sector and hence on girls who had followed vocational courses.

5. Duration

From 1983-84 to 1986-87. The projects were then absorbed into another larger scheme.

6. Methodology

Five groups were surveyed:

- former participants, regarding employment effects (written survey)
- youngsters participating in 1985-86 (standard survey)
- teachers participating in 1985-86 (written survey)

- employers participating in 1985-86 (interviews)
- a sample of "expert outsiders" (interviews).

Most of the data obtained were processed by computer and set down in report form.

Project 13

1. Name of the project and institution
Employment of Social Work Centre (OCMW) clients; Hoger Instituut voor de Arbeid (Higher Institute of Labour).

2. CEDEFOP category
Action to help the long-term unemployed

3. Nature and objectives of the project
The State Secretariat for Social Emancipation has introduced a number of measures aimed at improving the job prospects of those in receipt of social minimum income (e.g. access to certain projects, promotion of the employment of domestic staff, replacement of those on transitional pensions, reduction of employers' contributions in respect of the employment of additional staff).

The State Secretariat has also asked the Higher Institute of Labour to carry out a study for the purpose of publicizing these new employment opportunities and encouraging take-up.

The study involves setting up pilot projects in a number of Social Work Centres (OCMWs) aimed at finding employment for those on social minimum income either through the agency of the OCMW or with the OCMW itself. The results of these experiments are to be evaluated and policy recommendations are expected.

4. Target group

OCMW clients.

5. Duration

Twelve months.

6. Methodology

in the first phase the social workers compiled an inventory of local and regional options available to the OCMW in the area of employment assistance. Three areas are distinguished:

- post-school educational and training initiatives,
- job-finding services,
- employment-promotion measures (such as the new measures for those on social minimum income, the plus-one plan, the plus-two plan etc.).

In their municipality or region the social workers investigated the facilities available for the training or retraining of semi-skilled and unskilled workers (National Manpower Service and small business courses, bridging projects, the various initiatives in the general field of adult education etc.). The real impact of such facilities was considered through contacts with those responsible and options for cooperation were agreed.

Given the central position of employment in this study the first step was to contact all those principally involved in this field: the job-finding agencies of the National Manpower Service (RVA), the interim offices and the small business and professional associations. Individual employers were also contacted directly.

In the second phase a limited number of individuals were randomly selected from the population of those on social minimum income. Intake dossiers were compiled on these clients on the basis of OCMW data, supplemented with additional data from the clients. Each dossier covered the client's education, training and skills, employment capacities and the client's wishes and expectations regarding future employment.

In the third phase, the core of the study, the social workers made efforts to match clients' employment capacities and needs with the various facilities and services available at the local and regional level.

The records which were kept of the various steps taken by the social workers in this process of assistance served as a basis for the analysis of the various helps and hindrances found, of gaps in existing provision and of the policy decisions needed at the local and national level to facilitate the employment of OCMW clients.

7. Evaluation

A research report is currently being compiled and will be published at a later date.

Project 15

1. Name of the project and institution
Training projects for the long-term unemployed in collaboration with educational institutions and employers (Klechetermans projects); National Manpower Service (RVA)

2. CEDEFOP category
Action to help the long-term unemployed

3. Nature and objectives of the project
Expansion of the training opportunities open to a category of the unemployed whose job prospects are poor, with the ultimate aim of facilitating their employment.

4. Target group
Those in the 25-40 age group who have been unemployed for two years or more with an intermediate level of general, technical or vocational education (lower and higher secondary).

5. Duration
November 1986 to November 1987 (the project is being extended).

6. Methodology
- On the basis of labour market data all subregional employment offices of the National Manpower Service (RVA) prepare training initiatives which are discussed by the Joint Subregional Employment Committees and

approved by the RVA management board.

- The activities are organized in collaboration with schools, firms and trade federations.
- An employment evaluation is carried out by the principal administrative services of the Flemish Region.

7. Evaluation of methodology and result

- The employment analysis involved setting the characteristics both of the project (duration, nature, collaborative framework, whether or not on-the-job training was provided, whether training was concerned with general or specific job skills) and of the participants (age, occupation, sex, educational level etc.) against the employment outcome.

- Overall the training projects had a beneficial effect on employment, notably in the case of e.g. receptionists/ telephonists and offset printers, and more generally in that of ten-week courses.

Project 19

1. Name of the project and institution

Personal computer training in the metal industries sector; National Manpower Service (RVA)

2. CEDEFOP category

Use of new technology as a training instrument

3. Nature and objectives of the project

Personal computers are being increasingly used in the metal industries sector for a wide range of applications, and the training of the staff who have to work with the new equipment presents a considerable problem. Training programmes will need to be organized on a large scale. The National Manpower Service sees applications for PCs in mechanical design, numerical control programming, automation and robotics, and microelectronics.

4. Target group

Designers, engineers, constructors, draughtspersons, machine operators.

5. Duration

The development of the idea, the introduction of the computers and the compilation of the programmes took about a year. To enable a rapid start to be made much use was made initially of temporary teaching staff under contract from industry. Quite clearly the project is not yet finalized: improvement, updating and expansion will continue to be needed in response to technical change.

6. Methodology

Practical vocational training is not possible in the absence of the necessary professional tools. The first and most important step is thus market research into the hardware that is currently in use in industry and suitable for training purposes. This process is largely simultaneous with the development of the training programme.

7. Results

The actions undertaken meet a real need on industry's part.

Project 20

1. Name of the project and institution
Computer-aided instruction and industry-based training, an exploratory and descriptive study; Stichting Technologie Vlaanderen (Technology in Flanders Organization).

2. CEDEFOP category
Use of new technology as a training instrument

3. Nature and objectives of the project
An exploratory and descriptive study of the use of computer-aided instruction in industry (introductory level). The responses of a number of employees to computer-aided instruction were assessed in two case studies.

4. Target group
Employers and trade unions

5. Duration
January to December 1985

6. Methodology
- a limited survey of IT firms (6) covering existing computer-aided instruction systems,
- a survey of the use of computer-aided instruction,
- visits to institutions using computer aided-instruction (16) and interviews with persons with responsibility for training,

Project 23

1. Name of the project and institution

Survey of need for training courses for dispatch clerks in the road transport industry; National Manpower Service (RVA) and National Road Transport Federation.

2. CEDEFOP category

Curriculum development

3. Nature and objectives of the project

- To investigate the criteria applied in the recruitment of road transport and dispatch clerks.
- To gather information in connection with a possible training programme for road transport and dispatch clerks.
- To investigate whether firms are currently able to meet their needs for staff in these positions.
- To investigate whether firms are interested in collaborating with the training section of the National Manpower Service.

4. Target group

Those seeking work

5. Duration

6. Methodology

A survey form was sent to 229 firms in Vlaams Brabant and Brussels which are members of the Federation. Of these 72 were completed, returned and analysed.

7. Evaluation of the method and result

The study was limited to one subregion and to the members of the Federation, but can be repeated on a larger scale. On the basis of the study it was decided to organize a 25-week alternance course at the Vilvoorde centre for 15 unemployed participants wishing to train as road transport dispatch clerks. As of March 1988 the course is still in progress.

Project 24

1. Name of the project and institution
Occupational profiles: COBOT (Training Centre for the Textile and Knitted Goods Industry)

2. CEDEFOP category
Curriculum development

3. Nature and objectives of the project
To compile an inventory, for representative jobs in the textile and knitted goods industry (up to the lowest management level) of the knowledge, skills and attitudes which need to be taught and/or encouraged among workers (training profiles) if they are to meet the requirements of jobs (job descriptions) in this rapidly evolving industry.

4. Target groups
4.1. Textile education: provision of a "data package" enabling the textile schools, to the extent that this is possible, to gear what are of course general and polyvalent training curricula to the industry's capabilities and needs and to current and future qualifications requirements.
4.2. Independently operating training centres: an instrument enabling them to fulfil as efficiently as possible their complementary training role, particularly through more industry-directed course content and closer approximation to the actual situation within the industry.

4.3. Training services within firms: providing information on those aspects of knowledge and skills which, given their firm-specific nature, cannot be taught either by schools or by external training centres.

4.4. The state: information relevant to its employment and training policies, inter alia in relation to the raising of the school-leaving age.

4.5. Interested parties:

- National Manpower Service (RVA),
- Psychological, Medical and Social Centres,
- Company personnel departments.

5. Duration

5.1. First phase (from the collection of data to the publication of the basic report): May 1984 to January 1987

5.2. Second phase (application and updating of the data): ongoing.

6. Methodology

6.1. Establishment of central working group (steering group)
  - determination of research structure and method,
  - establishment and supervision of subgroups (subsectoral working groups),
  - development of standard forms for recording profile data,
  - preparation of final report publications.

6.2. Activities of subgroups (six)
  - selection of representative jobs in each textile

subsector,
- collation of profile data.

6.3. Coordination
- standardization of the work of the subgroups in respect of content, form and terminology.

6.4. Publication of the data
- establishment of an editorial committee etc.

6.5. Distribution of the profile data to the target groups.

6.6. Translation of data into visual form, inc. training films.

6.7. Updating the profile data.

7. Evaluation of the method and result

Result: occupational profiles are now available, in the form of separate leaflets, for 74 jobs in the textile and knitted goods industry (in the Dutch-language version; the French-language version is currently being printed).

Evaluation: given the recent date of the research and the fact that the data are only now being put to use it is not really possible to give an evaluation of the project at this stage.

Project 27

1. Name of the project and institution
Study opportunities for adults; Centrum voor Andragogisch Onderzoek (Centre for Research in Adult Education)

2. CEDEFOP category
Other projects

3. Nature and objectives of the project
- The development of a continuously updated inventory of study opportunities for adults in the Flemish Community, accessible through both publications and a database for personal-computer users.
- The generation of initiatives leading to a coordinated information and guidance network for adults wishing to study.
- The exploration of the scope offered by new technology in this connection.

4. Target groups
- Persons with responsibility for policy on training and retraining at all levels.
- Professionals providing educational and careers information and guidance.
- The public at large.

5. Duration
Unlimited

6. Methodology

R&D

7. Evaluation of the method and result

The process of promoting awareness both of existing needs and of the scope offered by new technologies has been successful. Better information on opportunities for study is now available to the general public. Continuing implementation will require considerable time and effort.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

VOCATIONAL TEACHER TRAINING
CURRENT FEATURES OF RESEARCH AND DEVELOPMENT WORK

NATIONAL VOCATIONAL TEACHER TRAINING INSTITUTION
(STATENS ERHVERVSPAEDAGOGISKE LAERERUDDANNELSE - SEL)

CEDEFOP
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1. INTRODUCTION

This report is the Danish contribution to the CEDEFOP-meeting on 13 - 14 September 1988: Meeting of national research and development organizations.

The report deals with current features of development work associated with the National Vocational Teacher Training Institution, SEL.

Development work at SEL is characterized by being closely related to the work of the Institution as the sole national institution for the training of vocational teachers. Here, "vocational teachers" embraces teachers at technical schools and commercial schools at both basic and further training levels and also teachers in labour-market training schemes.

Viewed in the light of developments within the sphere of vocational training, research and development work must have high priority at SEL. It demands greater openness and selection of subject areas where research and development work will involve co-operation with the vocational schools, but also with the Directorate for vocational training, the labour market-organizations and other institutions. From the standpoint of content, research and development work will in future deal with:

- vocational pedagogics
- development and evaluation of paedagogic methods/forms/ content and instructional materials

- changed requirements for students in vocational schools
- technological progress and internationalization
- information work
- in-house qualification of SEL-personnel

The development studies and experimental training schemes described in this report have been selected on the basis of the criterion that they should be of interest in vocational training-circles outside Denmark and therefore not be studies on specific features of the Danish training system.

2. DESCRIPTION OF THE PROJECTS

Foreign language-speaking students in vocational training

Purpose: 1. To compile and evaluate experiences of a basis-year's course with immigrants and refugees at technical schools and commercial schools.

2. Advisory assistance from SEL consultants with a view to the arrangement of courses.

3. To develop school-based courses for teacher qualification.

Content

The survey will be in two parts - a quantitative part and a qualitative part.

The purpose of the quantitative part is to compile statistical information on how foreign language-speaking students fare in the course of the basis-year (completion percentage, drop-out percentage, non-attendance, choice of subjects) and composite information with some background variables (e.g. nationality, sex, number of years in Denmark, education and occupational background).

The final form of the qualitative survey has not yet been completely worked out. A closer examination will be made of the following problem areas: the teaching situation, the multi-culture vocational school, on-job training places for foreign language-speaking students and foreign language speaking-students as students requiring funds.

The method used in the project is action learning. There will be joint discussion of everyday problems, proposed solutions will be submitted and executed and these will be developed further. From SEL's side, supervision of the day-to-day instruction will be offered.

Results

A series of courses has been held in 1988 for labour-market training course (AMU)-teachers at the vocational induction-course (EI)-centres for immigrants and refugees in vocational and labour-market training schemes, with good results.

The final report on the project is expected to be ready in the spring of 1989.

Women in vocational training

Purpose: 1. To develop teaching methods which cater for women in vocational training, on bases of equal status for women.

2. To arrange this internally within SEL, and also externally for interested parties both within vocational training schemes and elsewhere within the educational system.

Content

In order to generalize the results obtained so far at SEL with female teacher training within vocational and labour-market training schemes, a study is to be made both in relation to experiences elsewhere in the educational system and in the light of the special circumstances which apply to vocational training.

The project will provide an overview of the experiments which have been carried out so far regarding women in vocational training - e.g. introduction to male occupations, women-only teams in traditionally male occupations, instruction in specific subjects (mathematics, physics, etc.).

Material will be prepared for instructional use concerning the problems, and proposals will be formulated for paedagogic measures with a view to trials in technical schools and commercial schools in 1989. Lastly, endeavours will be made to hold special subject-days and conferences on the topic.

Results

The project is expected to be completed at the end of 1988. The intention in the short term is to take account of the changed requirements now for students, which are expected to become clearer now that women's participation in vocational training has become apparent and has altered. The idea is to have both traditional-type courses under the SEL - such as teacher training-courses and courses for school counsellors/studies-advisers, and possibly development of courses/seminars in which essential subjects within the field are studied.

The long-term prospect is that the paedagogic advances thereby made will influence general development within vocational teacher training, viewed in the light of future teacher-qualification requirements.

The PG-project

Purpose: To revise teacher training so that the content, structure and forms of execution of the training take account of the changes that have taken place and are taking place at the technical schools and schools for semi-skilled workers concerning the tasks and duties of vocational teachers.

The project embraces both theoretical and practical teacher training, the aim being to establish, through the project, better continuity in the teacher training-process as a whole and closer co-operation between the institutions and people who participate in the training.

Content

The project is being carried out in 3 stages up to the middle of 1989.

The first stage consists of drafting a report and drawing up a recommendation concerning the revision of teacher training, containing the binding ideas of SEL and the various organizations and individuals concerning training, and also a summing-up embodied in a proposal for the revision of teacher training.

Talks and interviews will be held with SEL's course leaders and representatives of on-job training counsellors

concerning experience with the current teacher training-model and ideas to improve it. In addition, studies will be made of the development trends in the schools: vocational teacher job-profiles, qualification requirements, tendencies in vocational teacher-recruitment, etc.
In addition, a conference will be held on teacher training, considered in relation to the short-term and long-term development of the technical schools and schools for semi-skilled workers.

Lastly, individual research and development activities will be initiated, which are considered to be of direct relevance to teacher training in the coming years.

The work in the second stage consists in drafting a new course syllabus. In addition, activities will be started with a view to the development of materials and methods for the different parts of training. Regional information meetings and interviews will be held concerning the development work, its perspectives and possible implications for the schools.

Lastly, research and development activities and other guiding and qualifying activities will be carried out for course leader- and on-job training adviser-groups.

In the third stage, pilot projects will be carried out concerning changes in teacher training. In addition, teaching materials are being produced (videos, tapes, digests, guides for exercises, etc.). Activities with a view to qualification are being carried out and, finally, regional meetings are being held on the "new" teacher training.

Results

As mentioned earlier, the project ends in the middle of 1989. The following results are expected from the project:

1) Possibly a proposal for revision of the circular on content and examinations in training for technical school teachers, of 20 December 1983.

2) Possibly a proposal for revision of guidelines for practical teacher training and for holding examinations in the theory and practice of training for technical school teachers, of 20 December 1983.

3) A new course syllabus for teacher training, including further details of the purpose and content of theoretical and practical teacher training and also guidance on co-operation between teachers theory and practical subjects. In addition, a description of requirements regarding teacher training-workshop equipment, etc.

4) Ideas on course leader- and on-job training adviser-qualifications and also proposals for courses and other activities for their qualification.

5) Ideas on the training of on-job training-advisers.

6) Ideas on wider co-operation between SEL and the leaders and teachers at technical schools and schools for semi-skilled workers, regarding the practice of teacher training.

7) Teaching-media and collections of reference material within selected (new or critical/important) fields.

8) Guidelines and information material for use in evaluating teacher training, both the theoretical and the practical part.

9) Proposals for development projects concerning teaching training in the coming years.

A survey of teacher qualifications among teachers at technical schools

Purpose: To reveal formal and informal qualifications among teachers at technical schools and to reveal their experiences and their development potentials.

Content: The survey si in three parts.

1. A questionnaire survey with 500 responses received to the 53 closed-end questions, which have been processed by computer.
2. A part 2 appended to the questionnaire, consisting of 5 open-ended questions which were answered by about 450 teachers.
3. A series of interviews with 30 selected teachers whom we interviewed on the basis of a semi-structured interview guide.

Findings:
- That a relatively large group of TS-teachers exists who have had further training or extended training;
- that the teachers are a young body with regard to length of service;
- that, on the whole, all of them have had experience in both teaching and trade or industry before their employment at TS;
- that the majority by far of the teachers maintain contact with business after starting employment as a teacher;

- that higher priority is given to the vocational aspect than to the pedagogic-psychological aspect;
- that in all cases higher priority is given to the vocational courses than to the pedagogic-psychological courses;
- that the majority of the teachers participate in pedagogic activities at school other than traditional classroom/workshop instruction;
- that three-quarters of them think that they have an opportunity to develop and to bring themselves up to date, pedagogically and vocationally;
- that one-quarter of the teachers do not think that they have an opportunity to develop and to update themselves pedagogically and vocationally;
- that not only the "formal" qualifications determine on which courses, and how many, a teacher can teach;
- that the small group of teachers who have management functions have had both organizational and teaching training-experience;
- that there are a number of teachers who have had organizational experience in trade or industry, but do not use it in school;
- that most of the teachers are well-informed and committed;
- that most of the teachers intend to maintain and/or improve their qualifications;

- that higher priority is given to the vocational aspect than to the pedagogic-psychological aspect, and that they are not considered together;
- that many of the teachers are seeking an overall development strategy for the school and hence for their own continuing vocational training;
- that the majority of the teachers feel bound to their department; but they have a hazy idea of the relationship with the rest of the school and with the training system as a whole;
- that many of them are seeking a common forum for debate;
- that 25% of the teachers questioned do not think that they have an opportunity to open up, develop and bring themselves up to date at the school;
- that many of them think of development and training on the basis primarily of a vocational tendency, while at the same time many teachers also give high priority to aspects relating to pedagogic-psychological development; but the vocational tendency and the pedagogic interest are not considered together;
- that, on the whole, all of the teachers emphasize future qualification requirements as being: versatility, problem-solving, general knowledge, co-operation, creativity and vocational skill as a matter of course; but that

the teachers do not themselves have anything to say as to how the future qualifications can be achieved;

- that many of them regard common subjects as an important part of training, but that the critical and socially overriding aspects of the subject are about to be supplanted by an attitude which is directed more towards equipment and practical utility.

The survey ended in March 1988. It was carried out for a study group under the Council for Vocation Training (erhvervsuddannelsesradet), by SEL.

PRODUCTION SCHOOL AND TEACHER QUALIFICATIONS IN VOCATIONAL TRAINING - with special reference to engineering and other metal-using trades.

PURPOSE:

To do a survey of production project-experiences within and outside vocational training, with a view to compilation of a project handbook.

To analyze the projects' educational and methodological bases as the basis for a vocational teacher training-scheme.

To determine the necessary teacher qualifications in connection with planning, execution and evaluation of production projects.

CONTENT:

The intention is to draw up, through the compilation of projects already executed, a catalogue of ideas, put into a form of specification which can be used by other project designers.

In addition, the intention is to describe various project designs, how ideas can be translated into practical teacher training-action.

Lastly, the various resource-possibilities that are available to teachers for projects will be discussed.

RESULTS:

The project handbook is intended to be used partly as an ordinary general introduction to production projects and partly for school-based courses resulting in the initiation of projects.

A crucial point is that there should be a necessary relationship between production project-development and teacher qualification.

The project is expected to be completed on 31.12.88.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

REPORT ON THE ACTIVITIES OF THE FEDERAL INSTITUTE FOR VOCATIONAL TRAINING (BIBB)

CEDEFOP
BERLIN
1988

Federal Institute for Vocational Training (BIBB)
Berlin/Bonn, March 1988

Report on the Activities of the Federal Institute for Vocational Training (BIBB) 1987/88

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Part A: General Description of Functions and Areas of Activity

Research and Development for Vocational Training

The Federal Institute for Vocational Training carries out **research and development activities** in the field of non-school-based vocational training. It also discharges **service and counselling functions** vis-à-vis the Federal Government and companies providing vocational training, functions for which its research activities provide the basis.

The purpose of these activities is to develop **principles to govern initial and continuing vocational training provision for skilled blue- and white-collar personnel and journeymen** in industry and commerce, the crafts, agriculture, the professions and the public administration and to update and upgrade vocational training by taking due account of technical, economic and social changes.

An important factor in this research and development work is **cooperation with those involved in the practical side of vocational training.** Over the past 15 years, for example, over 1,000 experts from all sectors of the economy have worked together with the Institute's personnel to restructure the training regulations (training specifications) for over 250 occupations.

The Institute's **main areas of activity** include:

- **Structural research** which is concerned with individual education, training and career trajectories and with corporate training activities. The research is focussed on training measures and the way in which knowledge and skills acquired are utilized within the company.

- Research in the field of **teaching and learning processes.** The priority fields here are training provision at the workplace, organizational forms for corporate training activities (e.g. joint training provision), and assessment and examination issues.

- Evaluation of **model and pilot schemes** offered by the Federal Government. Pilot projects in the following fields are currently being monitored in over 100 companies:
  - new technologies,
  - training provision for young ethnics,
  - development of training methodologies,
  - remedial training for adults,
  - reintegration of women.

- **Continuing training for trainers:** design of seminar concepts, e.g. on the following themes:
  - new metalworking occupations in industry,
  - women in technical/industrial occupations,
  - training in CNC technology.

- **Preparation of training regulations** on behalf of the Federal Government, whereby the training for currently 384 state-recognized occupations is restructured or updated in consultation with experts representing the two sides of industry with a view to taking due account of a changing technological, economic and social context. The Institute also develops **model training programmes** for the disabled.

- **Adult education:** studies on continuing training structures, the **learning difficulties experienced by adults,** and the **quality of continuing training.** The research findings here provide the foundations for designing continuing training schemes and for developing **continuing training regulations.**

- **Development of teaching concepts and training media** for in-company initial and continuing vocational training. To date, some 800 training media have been developed in printed or audiovisual form, predominantly for industrial/technical occupations (metalworking, electrical engineering, construction, carpentry, etc.). A keen interest has been shown in the training media for the new technologies and for the commercial sector.

- Studies on **vocational training costs.** These provide the basis for planning vocational training measures, decision-making aids for promoting vocational training, and important data for improving the quality of training.

- Promotion measures for **group training facilities** to complement the initial and continuing training provided by small and medium companies. The planning, establishment and operation of such centres qualifies for support from Government programmes which are implemented by the Institute.

- **Counselling service for the Federal Government and companies providing vocational training.** This function has become increasingly important over the past few years. Moreover, the growing interest forthcoming from abroad in in-company initial and continuing training concepts has resulted in a broad-based exchange of experience with numerous industrial and developing countries.

Part B: Outputs from Projects in Specific Fields

Within the framework of the Institute's overall mandate for 1987/88, attention should be drawn to the importance of findings from projects in the following fields:

1. Transition from School to Working Life

The 1986/87 Report on the Institute's activities presented the findings of the first survey carried out as part of a longitudinal study on transition from school to working life; the survey covered 10,000 young people who left school in 1984 and was conducted six months after the date of the final examination.

The main findings from the first and second enquiry on the integration aspect were as follows:

- 71% of the 1984 school-leaving cohort hoped that the company providing their training would continue to employ them after completion of training; only 62% stated that they had been offered prospects of continued employment.

- For 73%, employment immediately followed completion of training; 63% of this figure had found a job at skilled worker level, largely in the occupation for which they had been trained.

- A further interim assessment six months after completion of training showed that both employment trends and unemployment trends were moving in a slightly downward direction (from 73% to 67% and from 14% to 10%, respectively).

- By 1987, i.e. three years after completing training, 72% had found employment, 52% of these in the occupation for which they had been trained.

A further priority aspect in this field of activity is the vocational training situation of young ethnics. No new representative data has been compiled on this subject since the BIBB/CEDEFOP survey carried out at the end of the 1970s. A new study is therefore now to explore ways and means of raising the participation rate of non-nationals in vocational training schemes.

This new study, taking a representative sample of between 2,500 and 3,000 young people as its database, is not only to examine possible structural modifications but also and more importantly to develop strategies for creating greater equality of opportunity.

The analysis of the vocational training situation also includes a review of the current drop-out rate and its causal factors, e.g.

- educational background, range of occupational options,
- mastery of the language of instruction, family situation,
- information level, contacts, conflict situations,
- emigration problems.

Also to be investigated in this connection is parental involvement, as the previous investigation indicated the importance here of the role of supportive or counteractive parental behaviour. The planned investigation will take a closer look at this issue. At the same time, the study is expected to furnish information on the degree to which the parents of young ethnics are themselves prepared to undergo (continuing) training.

"New technologies: degree of penetration, skill requirements and working conditions" was the subject of a research project conducted jointly by BIBB and the Institute of Employment Research (IAB) as a follow-up to the 1979 study on the "Acquisition and Application of Occupational Skills". The main findings of this survey also provide information on continuing training, workplace profiles, participation, acceptance, job satisfaction, technical workplaces and workplaces for women. Other findings from the study have been incorporated in the Vocational Training Reports 1987 and 1988 published by the Federal Ministry of Education and Science.

2. Training Schemes for the Long-term Unemployed

Unemployment is extending over an ever longer period for certain groups of the population. The Institute is promoting efforts to **train unemployed persons** within the framework of its research activities and also with its series of model projects on vocational training for adults who have no formal vocational qualification and are exposed to particular risks on the labour market. The general purpose of this work is to improve the employment prospects of the long-term unemployed on the basis of vocational training measures leading to a formal qualification.

Proposals have been developed with regard to the following, inter alia:

- **financial allowances for persons participating in training schemes**, calling for a review of the statutory conditions governing promotion schemes;
- **child care** for single parents, with emphasis on the need to develop more suitable forms of child care backed up by the necessary resources;
- **formats for continuing training schemes**, with the following being regarded as indispensable:
  - mandatory advance measures relating to motivation, occupational choice and occupational preparation;
  - automatic provision of support and promotion facilities to compensate for deficits both pre-existing and resulting from periods of non-employment;
  - permanent sociopedagogic support facilities to help overcome conflict situations and provide retraining aids;
- adequate manpower resources for continuing training schemes and continuing **training for trainers**;
- measures concerning the **labour administration**, in particular with a view to upgrading training levels among counselling personnel and offering these suitable decision-making aids.

3. Training Schemes for New Technologies

Since 1984 the Federal Institute for Vocational Training has been acting on behalf of the Federal Ministry of Education and Science to implement a series of pilot projects within the framework of a "New Technologies in Vocational Training" programme. The objective of this priority promotion field is to develop a broad range of training schemes which are relevant and widely applicable in terms of their content, methodology and organizational structure and which strengthen ability and inclination to innovate at company level and upgrade occupational expertise and flexibility at the level of the individual trainee.

This work is expected to provide practical orientation aids and recommendations for vocational training, e.g. courses, training media and organization models, and also proposals for restructuring regulations governing initial and continuing training. The pilot projects concerned include the following:

- training in occupational and teaching skills for part-time instructors in industry with a view to their training company personnel in CNC technology;

- integration of modern, decentralized data-processing technologies into the training for clerical personnel in industry;

- development and testing of vocational training schemes in the field of CNC machine tool technology;

- initial and continuing training for office machinery technicians;

- integration of electronics in continuing training for skilled personnel in vehicle maintenance and automotive electrical engineering;

- development of documentation for initial and continuing training for robot programmers in the welding industry;

- new technologies in initial vocational training - need-specific training with special reference to control technology in forming operations;

- multi-company continuing training arrangements for skilled personnel in the field of machine operation, installation, servicing and maintenance.

The impact of new technologies on the structures of multi-company or group training facilities in the craft sector is to be investigated to furnish information on equipment, financial implications, organizations, curricula, etc.

4. Application of New Technologies in Initial Vocational Training

One project here has involved the development, testing and improvement of software packages for dynamic graphic simulation of CNC turning and milling. To support work with the simulator, a trainee manual has been developed which supplements learner-tailored material with a large number of examples and enables the learner to absorb the knowledge through private study.

Other projects carried out in connection with the statutory brief "to promote educational technology by means of research activities" have produced the following:

- practice books in the field of construction technology
- practice books in the field of wood technology
- practice books in the field of metalworking technology
- a user handbook for the CNC simulator.

These outputs have largely been developed on the basis of monitoring and evaluating development trends in working life and identifying their implications for vocational training by means of consultations with experts. The main elements here are

- analysis of the impact of structural and skill changes in the newly structured metalworking occupations with regard to media developments;

- investigation on the utilization and effect of BIBB media in the retail trade;
- development and testing of audiovisual media for training in work processes and skills in carpentry;
- adaptation and additions to the printed training media on wood technology to take due account of technical, economic and social changes;
- development of training media for multi-company training provision in construction technology and roofing;
- development and testing of a teaching concept for the floor-covering field.

5. Training of Trainers

The Institute develops various aids for the "training of trainers".

An evaluation of a total of 25 pilot projects on "training schemes for young ethnics" and an empirical investigation on the learning and training process serve as the bases for developing these practical aids, especially for those engaged in training and otherwise supervising young ethnics.

A further project has been concerned with continuing training measures for trainers working in small and medium companies in the retail trade. Training in occupational and teaching skills for those responsible for providing instruction in these companies has traditionally tended to be neglected. Planning and implementation aids have been developed and tested for use in training activities, and likewise materials for use in providing continuing training for part-time trainers.

The Institute offers concepts for adopting new approaches in in-company training in the form of seminar models for in-company and external continuing training for trainers. All seminar concepts are composed of three elements:

- **organizer's information** on what is required for running the seminar;

- **a trainer's manual** providing hints on implementing the seminar;

- **trainee documentation** composed of a detailed reader and work media which the trainees can use at their workplaces.

The following 16 concepts have been or are currently being finalized:

1. Guideline texts: a path towards independent learning
2. Women in industrial/technical occupations (in preparation)
3. Young Turks in vocational training
4. New aids for training on CNC machinery
5. Creative assignments to promote motivation and independent action
6. Language learning in training: the example of young Turkish trainees (in preparation)
7. The newly structured metalworking occupations
8. Situation-oriented training in didactics for training personnel
9. Motivation during training for lifelong learning (in preparation)
10. Young academics in training occupations (in preparation)
11. Young people with learning difficulties as candidates for training occupations in industry (in preparation)
12. Designing learning processes for heterogeneous groups (in preparation)
13. Data processing in training for commercial occupations (in preparation)
14. Preparation of high-impact training materials (in preparation)
15. Restructuring of training occupations in the retail trade (in preparation)
16. Restructuring of training occupations in the craft-based metalworking sector (in preparation).

6. Development of Training Curricula

By the end of 1987 new training regulations (specifications) had been issued for 229 training occupations involving some 1.4 million trainees. The total number of state-recognized training occupations was reduced within the framework of this restructuring process to a total of 384. In the year 1987 alone, 26 of the new training regulations developed by the Institute were made legally binding for ca. 290,000 trainees by statutory decree issued by the competent Federal Minister. The new training regulations replace 63 older regulations. This concentration secures better versatility-induced employment prospects for the ex-trainees and also promotes mobility. By 1990, updated training regulations covered by the Vocational Training Act will be in force to govern the training provided for 95% of all trainees. At the present time, major restructuring projects are under way for the craft-based metalworking occupations and for office occupations. It is already clear that the regulations governing the major commercial occupations, which were updated as recently as the mid-1970s, will again have to be revised in the next few years in order to take account of the substantial organizational changes which have taken place over the past 15 years in commercial management and administration.

7. Evaluation Methodologies

The issue of evaluation methodologies was not taken as the focal point of any individual projects during the period under review. Instead, the subject was addressed in connection with other issues, e.g. in the project on "The application and impact of the media developed for the retail trade by the Federal Institute for Vocational Training". Here, the purpose of the research activities is to analyse and interpret the way in which the media are used in retail companies and assess their impact. This is intended, inter alia, to shed light on the change processes induced in training by the use of these media. Similar evaluation aspects are also addressed in other projects on training media developed for other occupational fields. Other projects carried out have sought to verify the practicability of individual training regulations. At the present time, one such project is being carried out on the training regulation governing supply and disposal service fitters.

8. Training Programmes for Managing Technological Change

None of the Institute's projects are exclusively concerned with research to develop proposals and recommendations regarding training programmes for managing technological change. The Institute is nevertheless concerned with this problem field in a variety of ways. When developing and updating the training regulations and the concomitant implementation aids, the Institute takes special account of the need for preparing managerial and training personnel for handling new technologies. When developing training aids for in-company training, the Institute makes provision for specially designed documentation to meet the training needs of the trainers concerned.

The seminar concepts referred to under 5. above likewise include manuals to prepare the trainers and seminar directors for handling new technologies. This is a particularly strong element in the seminar documentation for the training in CNC technology. Finally, this issue is also addressed in projects in the field of continuing vocational training insofar as the necessary seminar learning material is already incorporated in the design of the relevant continuing training regulations.

9. Other Important Research and Development Projects

One project, based on a description of skill requirements and continuing training opportunities for persons employed in extra-hospital health and social care activities, is intended to develop a recommendation for designing a continuing training concept relating to work in a community social centre.

Another project is examining the financial cost of training in new technologies; the objective here is to determine the nature and scope of training in selected new technologies in the technical/industrial field and the additional costs incurred thereby and also to investigate the material and financial inputs required for training in selected new technologies in multi-company training centres on the basis of corporate experience.

A project to analyse the continuing training opportunities and requirements in selected regions is intended to evaluate supportive and constraining factors in determing the opportunities to be offered and identifying training needs.

The project "Environmental protection in vocational training" is intended to provide ideas for supporting those engaged in providing vocational training in teaching material relating to environmental protection.

The findings of pilot projects for remedial training for adults have provided important insights for developing aids for designing vocational and pre-vocational training for this specific target group.

One of the Institute's permanent activities is that of carrying out statistical analyses and surveys with regard to the training opportunity situation. The questions are designed to secure information on companies' attitudes towards the various categories of applicants for training places, such as girls, school-leavers with an academic qualification, etc., on the occupational preferences of young people, their mobility, etc.

Part C: Future Research and Development Priorities

The following priorities are envisaged for research activities in the coming years:

1. Implications of information and communication (I&C) technology for work organization and training.

   Does the introduction of I&C technology and its application in work processes call for a restructuring of further occupational fields and occupations? Will new occupations emerge? What developments can be expected in the continuing training field?

2. Training in and application of multidisciplinary skills.

   What role do multidisciplinary skills play in work processes today? Is it possible to define work-field-specific profiles for multidisciplinary skills? Where are the greatest deficits to be found?

3. Training needs and training in environmental protection.

   What training should be provided in environmental protection in order to identify or apply new technical and economic solution approaches? Which (new) fields of action having a distinct environmental relevance open up new market opportunities and new occupational opportunities? Would newly defined occupations/continuing training occupations be of benefit?

4. Changes in the significance of work, occupation and learning.

   How are attitudes towards vocational training changing in the light of the rapid devaluation of pre-existing knowledge resulting from subsequent new and additional training? Do certain groups (e.g. those with learning difficulties, older workers) suffer an additional disadvantage from the pressure for training?

5. Occupational integration and reintegration.

   How can the transition from pre-vocational measures to vocational training be facilitated? What remedial training concepts are required for facilitating re-integration into working life?

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

CEREQ
CENTRE D'ETUDES ET DE RECHERCHE SUR LES QUALIFICATIONS
(CENTRE FOR STUDIES AND RESEARCH ON QUALIFICATIONS)

CEDEFOP
BERLIN
1988

CEREQ
(CENTRE D'ETUDES ET DE RECHERCHE SUR LES QUALIFICATIONS)

(CENTRE FOR STUDIES AND RESEARCH ON QUALIFICATIONS)

CEREQ OBSERVATORIES

This report does not claim to provide full information on the CEREQ studies programme. Rather, it focuses on a key and permanent aspect of its activity, namely the observatories of the various features of the training-employment relationship. The first such observatory falls under Chapter I : School/employment transition, whilst the others on qualifications analysis are covered by Chapter IX.

I - SCHOOL/EMPLOYMENT TRANSITION

Gradually installed starting in 1975, the Observatory on entries into working life (EWL) (Observatoires des entrées dans la vie active - EVA) provides statistics and analyses on access to employment of young people and on the early stages of their working life.

Right from the outset, the EWL Observatory aimed to cover the entire field of initial training completion together with the provision of an analysis of training-employment relationships in rather fine segments. This assumed the questioning of very large samples and the resulting financial limits led to the choice of two main methods : sample surveys in the main conducted via mail and the spread of the inquiries over a four year span, each year covering a specific section of the education system : secondary education divided into level and higher education on a subject basis.

In 1986, the observatory was reorganised to include two main parts : decentralised surveys on entry of young people into working life and a national survey on career development.

1 - Decentralised survey on entry of young people into working life

Why a decentralised survey ?

Because regional institutions and services increasingly require information of direct use to them to devise and follow the activities entrusted them under decentralisation.

Because schools are interfacing with the environment and must follow the progression of their alumni.

Because national services are unable to produce all the data required at the regional and local level, national statistics however remaining indispensable for the implementation of State educational policy.

The description of the workings of the survey now follows.

CEREQ and DEP* have designed a decentralised survey on entry of young people into working life which was tested over a three year period and gradually extended to cover all of France since 1986.

The survey covers all State and private secondary schools under the Ministry of Education (save for apprentice training centres for the time being). Secondary schools (collèges = 1st level of the secondary, lycées = 2nd level of the secondary), vocational establishments included, receive in January all the requisite survey documents (instructions, questionnaire, etc.). The survey thus is conducted under the direct responsibility of the principals.

The questionnaires are sent out in February to all students having left the school in the course of or at the end of the previous school year and not enrolled in another educational establishment. All outgoing students are questioned, irregardless of year (even if they dropped out along the way), unless coming out of the final year

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*Direction de l'évaluation et de la prospective (Directorate for Evaluation and Forecasting), including the statistical department of the Ministry of Education.

...

QUESTIONNAIRE

DECENTRALISED SURVEY OF ENTRY OF YOUNG PEOPLE INTO WORKING LIFE

of general education (indeed, the vast majority of them are going on with studies). Students having failed to reply to the first questionnaire are sent a second one.

A very simple initial manual processing allows the schools to acquire an overview of the vocational integration of their alumni. The survey documents (list of students questioned, questionnaires and copies of the overviews) are then centralised at the Regional Education Authority.

The Regional Education Authority statistical department then checks and exploits the data. The addition of the overviews provides rapid initial results as early as September.

Nationally, DEP proceeds to the summing up of the overviews whilst CEREQ exploits a national representative sample of 40,000 questionnaires.

The information obtained is described below.

The school overviews enable to know on the basis of sex, year and training specialty the number of students in employment, those looking for a job, those doing their national service and those in apprenticeship or training.

At the regional education district level, an initial rapid exploitation of the data provides an evaluation of training completions together with vocational integration indicators (level of employment, unemployment, entry into apprenticeship, etc.), always based on sex, year and specialty. This information is also available at the sub-regional education district level.

Subsequently, more exhaustive processing of a sample of questionnaires enables the cross-checking of information on student characteristics (sex, age, diploma or not, etc.) with data on their vocational integration (occupational classification, employing enterprise size and so on). Starting with the 1987 survey, it will be possible to exploit data on the employment held.

Nationally, information similar to that on the regional educational district level will be available.

The Directorate for Evaluation and Forecasting carries out the national addition of the regional education district summary tables.

Every two years, CEREQ is going to use a national representative sample of 40,000 questionnaires to collect information on the diplomas acquired by young people, their first employment and in what sector, information excluded from the DEP annual exploitation.

As stated above, the processing of these 40,000 questionnaires will yield information on the initial vocational integration of young people. Those completing apprenticeship do not fall within the purview of the decentralised survey. This shortfall of information has led several regional educational districts to take the initiative to conduct specific surveys on this population.

Without prejudging the extension and duration of these surveys, CEREQ has included in its 1990 programme a national survey on the vocational integration of young people coming from apprentice training centres in 1989. The telephone panel method will be employed; the response rate of these populations to a national mail survey is indeed too low. The questionnaire model used and the date of questioning will be compatible with those of the decentralised survey. This solution will make it possible in 1991 to compile a cross-country file of education system completions in 1989.

To obtain additional information on the initial vocational itinerary of these apprentices, they shall be questioned again via phone in 1991.

2 - National surveys on career development

The vocational integration of young people upon education system completion has stretched out over the past few years. The high youth unemployment levels whatever their training background seven months after leaving school points to the limits of the decentralised survey on this score. The integration process itself has become highly complex because of the many special measures and situations open to young people.

Following the third wave of surveys, the choice thus fell on a three year observation period upon education system completion. New questioning a few years later of certain categories of individuals is in the pipeline. Finally, the same four year period as before will apply to cover all training levels first between 1987 and 1990 and then from 1991 to 1994.

The division of the survey field is based solely on the training level. Sample size and survey method vary according to the youth populations questioned.

a) Higher level

The analysis of the first survey wave has revealed strong and stable relationships over time between training streams and employment categories. These streams are identified by an institution (schools, universities, etc.), a diploma level (B.Sc. in Engineering, B.A., Master's degree...) and an ad hoc clustering of training specialties.

To yield such detailed results, a sample of 25,000 exploitable questionnaires is required.**

**This figure is insufficient, however, to cover the medical, paramedical or social services sector, and also arts and architecture.

This objective requires using a combination of mail and direct interview surveys.

b) Baccalauréat (Secondary School examination giving university entrance qualifications = G.C.E. A-levels) or equivalent

More and more young people have been leaving school with a Baccalauréat over the past few years. Presently, the rate of further schooling is very high following all the series of this university qualifying examination; however, the length of time spent in higher education and the dropout rate vary strongly according to the general or technical exam series.

This explains why since 1985 young people with the Baccalauréat are interviewed twice : first via mail to find out the subject orientation and progression of post-Baccalauréat studies (November 1986 survey on those sitting the 1983 Baccalauréat exams) and, secondly, via interview to follow the career development (1988 survey) of young people having left the education system without higher education diploma or Baccalauréat.

c) Levels below the Baccalauréat

A reminder is provided that for these training levels the decentralised survey and in particular the exploitation of the CEREQ national sample every two years enable to find out the first jobs held after specialised training completion. The career development surveys thus are concentrated on the analysis of the vocational integration process, the passing through youth measures, the type of initial employment held and the beginning of job stability.

The need to resort to interview surveys (conventional mail surveys are not very effective at these levels) weighs heavily on sample size.

The planned programme will make it possible to obtain some 11,000 exploitable questionnaires in 1989 and 1990, to the exclusion of apprenticeship entries and completions.

3 - A system remaining open to ongoing changes in the education system and to the recruitment patterns of industry

The importance has been stressed of the changes to the EWL Observatory over the last 10 years to take account of the new training-employment relationships. The study of the vocational integration and labour market of young people remains the chief objective; thanks to the interplay of the survey field division and the use of a wide range of methods (mail survey, interview survey, telephone survey), it is also possible to keep track of these changes and interpret their effects.

Accordingly, since 1985 the purview of the surveys on the higher levels and Baccalauréat is no longer limited to education system completions but has been extended to the diploma holders of each main type of institution beyond that level, whether or not engaged in higher education studies.

This choice allows the analysis of vocational integration under a dual angle : that of a training institute by taking into account the importance of further schooling (example : career development of Baccalauréat holders or of Technological University Institute graduates) and that of the whole education system by the elimination of double counting.

Likewise, the use of the telephone survey opens new vistas for the collection of complex information which risks being distorted and even forgotten by individual memory during a retrospective interview survey. Depending on the populations, the telephone survey could come before an interview survey or replace it. This would allow larger sample sizes for certain groups or specialties of training at the Baccalauréat level or below.

IX - OTHER IMPORTANT PROJECTS

The other systems linked to employment and qualifications analysis are described hereafter in a much more summary fashion.

a) The reader is reminded of the Répertoire Français des Emplois (RFE) (French Employment Directory) laid down between 1974 and 1981 to provide information for guidance, placement and training, contribute to the revision of the employment statistical classifications and help enterprises in the area of job classification, continuing training and forward personnel management.

Based on over 10,000 direct observations of working situations, this work led to the detailed description of 850 characteristic situations or "typical jobs" and the access means thereto.

Since coming out, the French Employment Directory has not been updated systematically but it is still employed as reference matrix and detailed description of the situations observed in the course of the seventies. In the case of EDP employment, the publication of a work on this occupational field containing an analysis of developments together with detailed employment descriptions based on the RFE principle can be considered as an updating of the latter.

b) CEREQ has a special responsibility in the updating of the Répertoire Opérationnel des Métiers et des Emplois (ROME) (Operational Trades and Employment Directory). This consists of descriptive sheets defining and classifying employment prepared by the Agence Nationale pour l' Emploi (ANPE) (National Employment Agency) at the beginning of the seventies with a view to providing a common language for the compilation and matching of job supply and demand. This system no longer being adapted to the current situation and needs, the ANPE has undertaken to prepare a fresh nomenclature and new diagnostic and guidance instruments. It has requested CEREQ's assistance in view of using its experience acquired when preparing the RFE and also gained in the area of the study of the problems involved in qualifications analysis, occupational structure definition, retraining operations and human resources management, for the successful setting up and use of an analytical framework.

c) The programme for the observation of enterprise employment and work trends (programme d'observation de l'évolution de l'emploi et du travail en entreprise - POETE) was implemented at the end of 1984 by CEREQ and the eleven research teams associated with it. Face to the far-reaching changes presently affecting work and occupations, this programme aims to provide a general account of these changes and also to place the developments specific to an enterprise within a broader perspective.

It consists in following by means of regular surveys a panel of enteprises and establishments. These are in-depth surveys covering a wide range of quantitative and qualitative facts, the spotlight focused particularly on the latter, capable of being used for various research projects. The two main themes under study are the change of occupational groups and new enterprise management patterns.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

PROGRESS REPORT ON SUMMARY OF INVESTIGATION AND ACTIVITIES

ITE
INSTITUTE OF TECHNOLOGICAL EDUCATION
MINISTRY OF EDUCATION AND ECCLESIASTICAL AFFAIRS
ATHENS

CEDEFOP
BERLIN
1988

MINISTRY OF EDUCATION
AND RELIGION
TECHNOLOGICAL EDUCATION
INSTITUTE
56 Syngrou Avenue
11742 Athens
Tel: 9216603

Athens,14th March 1988

PROGRESS REPORT
SUMMARY OF INVESTIGATION AND ACTIVITIES

1.General

Due to earlier reports/presentations about the Technological Education Institute (ITE) in the annual CEDEFOP reports, the nature of the Institute is well-known.

Specifically, the ITE also has decision-making authority such as responsibility for matching status of Foreign with Greek colleges and judging the status of various Foreign Tertiary Technological Education degrees as equal to corresponding Greek ones. In addition, it has authority to commission research into such areas as Technological/Educational Studies and has counselling/coordinating responsibilities such as submitting solutions on various subjects to the Ministry of Education and the co-organisation or coordination of various subjects relating to training or retraining.

From the above-mentioned types of activities, and in answer to CEDEFOP's communiqués of 15.12.1987, here follows a description of activities which are of a research and coordinating nature (as related to training/retraining).

2.The Programmes

2.1.Transition of young people from school to work environments

Following the European Community's programme "TRANSITION II", Greece has undertaken three (3) programmes:
- SEP (GR 13), further training of teaching personnel in school career counselling.

This programme is aimed at secondary education level teachers to train them in the application of the Schools Career Orientation Programme (SEP) in the various secondary schools (Gymnasium-Lykeions).

The programme's methodology includes theoretical training in SEP principles in the form of a 5-month seminar and then application in the form of practical exercise carried out by the 'students' in various schools.

At the same time the methodology involves all the participants in drawing up detailed programmes and making proposals relating to the further development of the SEP programme at secondary educational level.

- AGRO (GR 14), programme for retraining staff in the organisation and administration of agricultural cooperatives.

This programme together with the cooperation of the cooperatives themselves, is aimed at training Lykeion graduates in becoming members of their staff.

The methodology includes theoretical training relating to the organisation and administration of of small-to-medium sized cooperative agricultural units as well as practical training in these same.

- LINK (GR 15), programme for building the awareness of integrated comprehensive Lykeion students (EPL) of the environment (social, political and productive sectors). The programme is targeted at students in the last three years of the Integrated Comprehensive Lykeion (EPL) in Rethymnon (Crete), Veroia (Macedonia) and New Philadelphia (Athens).

The programme includes short studies related to the environment (social, political and manufacturing) of each Lykeion, and are carried out by the students under teacher supervision. The programme also involves a series of visits or presentations to and by the Lykeions and the various authorities in their area.

The above three (3) programmes were completed in the 1986/87 academic year. However, according to a decision of the Education Ministers' Council of the European

Communities issued on the 5th December 1985, the deadline for the final format and distribution of results of the various prototype-experimental programmes in the Community's TRANSITION II programme will be extended to 30th June 1988.

Thus, the ITE which has a coordinating role and has responsibility for-in the final distribution of results phase- printing and distribution of the final papers drafted by the individual operative committees for each programme, all within the framework of the progammes' execution-implementation, as well as being responsible for organising seminars or involving its staff in conferences, always with the objective of distributing the results of the aforementioned programmes.

Specifically, the ITE published the activities carried out in the third phase of implementation of the AGRO, SEP and LINK programmes. It also distributed 1000 copies to various administrative and educational bodies.

Two further publications relating to these programmes are expected to be issued during 1988. Specifically, a special volume will be published with the final expositions on the Greek programmes as well as the Committee of the Council of Ministers' exposition which refers to all the experimental prototype programmes of TRANSITION II. An additional special volume will refer to the SEP programme.

Moreover, the ITE took part in three (3) seminars organised by the TEI and various other bodies- in Rhodes, Herakleion and Salonica where Greek (and European programmes in general) were presented.

Apart from its information distribution function, the ITE coordinates the activities for the formulation/pre-preparation of new transitional programmes which will be included in the Community's "TRANSITION III" programme, its implementation beginning this year (See also 2.10).

2.2 Training aimed at dealing with long-term employment

As mentioned in our previous report, the ITE, working with the Secretary General's Office for Research and Technology (and funded by it), has undertaken to carry out a survey with the aim of finding out personnel requirements of Greek Industry and how these needs can be covered by TEI graduates.

This survey, which includes carrying out an empirical study in the form of a questionnaire as well as interviews, is aimed at doing something about long-term unemployment through the suitable adaptation of TEI courses or the operation of specialised training departments provided under Establishment Law No. 1404/83 (which relates to the TEI and the ITE).

The survey is currently in its first phase and the methodology was described in our paper for 1987.

The ITE's investigation of General education graduates on the one hand and Technical/Vocational School graduates on the other relating to the progress of their studies and their search for suitable employment can be included in the same category of surveys related to reducing long-term unemployment.

The above comparative survey was allocated to the ITE by the Ministry of Education and should be completed within 20 months.

The survey's methodology includes reporting on various TEI statistics for the year 1982 onwards relating to students of General and Technical/Vocational Lykeions as well as a representative sample of industrial and production units. Computers will be used in the synthesis and analysis of the results and guidelines will be put to the YPEPF on what steps to take in helping new graduates adapt to the world of work.

The prgramme's objectives include the creation of a database file on computer and the build-up of a series of tracking studies which will be repeated at 3 year intervals, the average length of studies in the Lykeions and the TEI.

2.3 Training in New Technologies

The ITE, under its function as programme coordinator for training/retraining personnel at secondary education level, also takes part in a series of programmes which take place at the following TEI Institutes: Athens, Piraeus, Patras, Larissa and Kozani, which relate to the further training of teaching personnel in the use of computers so that they can be in a position to teach the subject of Information Technology. This has already been included experimentally in the teaching programme of a series of secondary General Education schools as well as in departments of Technical/Vocational and Integrated Comprehensive Lykeions, or more generally to train personnel in the use of computers to fulfill the need for 'handlers' of the computerised systems of of various services both in the TEI themselves as well as in secondary level administrative bodies etc, or higher.

These programmes include theoretical and practical exercises in computer usage and are partly financed by the European Community's Social Fund.

2.4 Use of New Technologies in Training Programmes

The ITE does not take part in these programmes. Training ing courses for teaching personnel in the use of new technology in teaching programmes are covered by the School of Technical/Vocational Teaching and Administration (SELETE).

2.5 Training for Teachers

Under the government's Education Development programme, the ITE has undertaken to organise 50 seminars during the next four years with the aim of retraining teachers and informing them of the latest scientific dvelopments in their field.

In addition, the ITE takes part in organising seminars in each of the TEI departments, makes presentations relating to the various operational problems, and proposes solutions.

The above programmes have already begun in collaboration with the TEI's Special Service department in the Education Ministry, and the Science Council of the ITE has completed its proposals for the issue of a Ministerial Decision governing the operation of the programme overall.

The methodology of the above informative/retraining programmes includes presentations by experts and visits to various research/education/production/service units.

2.6 Drafting detailed programmes

Under its authority for drawing up theoretical programmes as well as guidelines for practical training, the ITE has in the last two years drawn up a whole series of detailed programmes and programme outlines amongst which are the following:
a) medical instruments b)energy technology c)photography d)construction e)foundation laying f)automation g)wine

h) food i) interior decoration.

At the same time, further programmes (theoretical as well as practical) are currently being developed. The ITE forms a number of teams to work on them. Each team is appointed a coordinator from the Institute's committee and each team comes into contact with the production sector. It also gathers data from various sources both at national and international level.

In order to facilitate the implementation of the above programmes (theory and practice), various seminars are carried out either at the Ministry of Education or elsewhere, where the programmes are presented as well as how to implement them.

With regard to education/training of staff who work on the training/retraining programmes, this is done during the special prototype training programmes such as SEP, AGRO and LINK in which both trainers and trainees take part, in all phases of the implementation and in the organisation of teaching material.

More specifically, eg. on the SEP programme (GR 13), the selection of teaching subjects as well as training methodology in the career-orientation programme, was carried out with the full cooperation of all participants.

2.7 Information distribution

Two basic distribution methods are used:

- Printed material produced/adapted by the ITE and relating to the various programmes.
- ITE-organised seminars and conferences, or with the involvement of other authorities, at which specialised subjects are presented, having been selected from the same programmes or studies drawn up by the ITE.

The ITE does not carry out training programmes or seminars on methods of distributing results/progress of surveys or research, neither do any other authorities.

ITE staff do however, with their involvement in the distribution process, acquire a great deal of experience which could be classified as self-teaching.

Generally, programmes or seminars which have the objective of imparting methods of distributing results are not carried out under the jurisdiction of the Ministry of Education.

2.8 Training in how to exploit technological progress/opportunities

The ITE is not involved in such programmes (See however Appendix relating to Subject 3 "Development of Training Programmes in New Technologies").

2.9 Other major activities

The ITE has undertaken to carry out a survey relating to what motivation young people have to continue their studies after obtaining a first certificate (degree or diploma).

The ITE was commissioned to undertake this survey by the Education Ministry and should be completed in 10 months (within 1988).

2.10 Future priorities

The fact that the ITE has undertaken so many new activities (and apart from those which have been mentioned, there are others), has, in effect tied up the Institute's resources relating to surveys and research on the one hand and training/retraining on the other for several years.

Apart from this the Institute is also planning new activities at European Community level, such as working with corresponding Institutes in other Memeber-States.

Specifically, as part of the 'TRANSITION III' programme, the ITE is planning programmes which operate on a 2-way or intergovernmental exchange basis, which is also in accordance with the European Community's programme.

At the same time, the ITE intends to publish the results of its surveys and research and to further publicise its work.

To this end, a Ministerial Decision has been passed relating to setting up an ITE Information Bulletin, initially on a biannual basis and later increasing to four issues per year.

T.Papatheodossiou
Consultant to the ITE and
National Coordinator of
TRANSITION II Programme.

APPENDIX

ORGANISATION FOR THE EMPLOYMENT
OF THE LABOURFORCE
O.A.E.D.

RESEARCH ACTIVITIES AND DEVELOPMENT OF VOCATIONAL TRAINING PROGRAMMES
1988

The OAED has been set up to design, develop and implement vocational training programmes for young people and adults and within this framework it carries out mainly applied research which is directly realted to its activities. The responsibility for designing and carrying out these research surveys is held by the Training, Programme Development and Teaching Methods Committees.

The main research and development activities in 1988, and according to the CEDFOP's classification included:

Subject 3 : Development of training programmes in new technologies

An experimental programme for basic vocational training in the skills of Mechanical-Electronics Design and Industrial Electronics Automation is being developed since1984 as a pilot programme for training programmes in new technologies. The nucleus of the first is design using computers (CAD) and the second, application of micro-electronics in industrial automation.

The programme which is already included in the EUROTECNET is being used as a platform for research and development in teaching methods and materials with emphasis on combining the necessary knowledge and skills required for the use of computers. The programme is expected to be completed by end 1989.

Subject 5 : Retraining needs of OAED teaching staff.

This piece of research was begun and was completed within 1988. It was aimed at 500 permanently employed teachers involved in carrying out OAED vocational training programmes. The survey used mainly SURVEY RESEARCH methodology and included gathering information from the teachers, their students and the school's management relating to the teachers' abilities and knowledge and the demands placed upon them by the programme content and methods of teaching.

From the analysis of the results it was possible to find out the immediate and medium-term training and retraining needs for the teachers which would be aimed at maximising their contribution to the effective performance of the vocational training programmes.

Subject 6 : Design and development of adult MODULAR SYSTEM training programmes.

Within the framework of a general programme of developing flexible vocational training and retarining programmes adapted to peoples' needs, the research and development of two programmes using the MODULAR system have been completed relating to the training of adults in the areas of Electrology and Motor Mechanics. These programmes which are aimed at adults changing jobs due to technological developments, will be experimentally carried out at the end of 1988 when they will be completed with a FORMATIVE EVALUATION. In the development stage , information was collated on the actual work practices as they are in the Greek job market, together with integrating and ranking the knowledge and skills required and breaking them down into sectors from the point of view of teaching needs and requirements. At the same time corresponding European experiences were taken into account.

The orientation and extent of the development of OAED MODULAR system training programmes will depend on the evaluation of the results and problems encountered in the implementation of the two pilot programmes.

Subject 10 : Future priorities in research and development.

Immediate priorities in the next two years include:
a) a system for evaluating the quality of basic vocation-

al training programmes provided by the OAED.

b) Development of dual system or alternating training, combining practical work experience with correspondence training. Such a pilot programme has already been designed for silver and goldsmiths where its experimental implementation will commence in the next few months.

c) The development of an introductory programme into the principles of operation and use of electronic data processors (COMPUTER LITERACY) and which will be introduced at the beginning of vocational training programmes for young people with the content adapted to the programme content in order to provide suitable motivation for learning.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

SUMMARY OF MAJOR RESEARCH AND DEVELOPMENT PROJECTS - 1988
FÁS - DUBLIN, IRELAND

CEDEFOP
BERLIN
1988

In accordance with the Labour Services Act, 1987, AnCO - the Industrial Training Authority, the Youth Employment Agency and the National Manpower Services were amalgamated from the 1st January 1988. FÁS, the Training and Employment Authority is the new organization set up to replace and incorporate these agencies.

The functions of the new authority include:

- the provision and promotion of Vocational and Industrial Training;
- the administration of Employment Schemes;
- Advice on Training and Development for Community Groups and Co-operatives and
- Employment placement services.

FÁS is also responsible for researching and developing its training and employment activities and the provision of its services overseas through a planned subsidiary.

The new Irish Training and Employment Authority has a non-capital budget of IR £ 183m and is the largest non-commercial state agency in Ireland employing a staff of 2,423. It has a network of 17 training centres and 47 local offices. In 1988 FÁS will provide training programmes and employment schemes to approximately 70,000 people (48,000 training places and 22,000 employment scheme opportunities).

The Research and Development Activities of FÁS described in this paper, include those which commenced prior to the amalgamation and any new activities assigned after the amalgamation. The 1988 FÁS Research and Development programme has not yet been finalised due to this amalgamation.

Apprentice Intake Study - Ref. No. 1, 9

The aim of this study was to determine the required national intake for the main apprentice trades for the period 1988-1990. The study involved the forecasting of the number of craftspersons required in the future based on employment and craft trends, and investigated craft and apprentice wastage in Ireland. The report of this study was recently completed.

Training and Employment Programmes for Youth in the USA - Ref. No. 1

This project involves the analysis and evaluation of major federal youth training and employment programmes in the United States of America. The study is based on a review of policy responses and a number of case study visits in the United States of America. This research project is sponsored by FÁS, the Training and Employment Authority and has been undertaken jointly by the River Communities project of the University of Pittsburgh and the Social Science Research Centre, University College, Dublin. A report on the study has been completed.

In-Company Placement Study - Ref. No. 1

This study was an investigation of the 'in-company placement' period of a sample of participants on youth employment and training programmes. The report findings were published by FÁS in March 1988. The findings indicate that there is a high level of satisfaction among participants and sponsors (employers) with the quality of in-company placements. The programmes and schemes examined in the study include the Work Experience Programme, the Vocational Preparation and Training Programme, and AnCO Training Programmes.

ON-GOING PROJECTS

Survey of Early School Leavers eligible for the Social Guarantee - Ref. No. 1

This study was initiated in late 1987. The objective is to examine the labour market experiences of a sample of early school leavers who qualify for the Social Guarantee Scheme. The study will examine the employment history and occupational status of the young person and will measure the level of participation on Social Guarantee Schemes and training programmes.

School Leavers Survey - Ref. No. 1

A second School Leavers Survey has been carried out by FÁS (formerly Youth Employment Agency) to provide further information on the occupational status of young people who left the educational system in 1981-'82. This group has already been surveyed in 1984. The second survey aims to examine the effects of different types of education (post primary and higher level education) on the labour market experiences of young people now five years out of school. This project will be completed by the end of 1988.

Evaluation of Jobsearch Programme - Ref. No. 2

During 1987 a new initiative for the long-term unemployed commenced. The 'Jobsearch' programme is a four week training course in job seeking skills aimed at the older long-term unemployed. An evaluation was carried out during its first year of operation to assess the impact of the

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7. Methods of evaluation

It will not be possible to deal with all the subjects associated with evaluation as thoroughly as they deserve in the course of the current year. ISFOL will therefore concentrate its efforts on analysing and proposing methodologies and instruments relating to the following:

- qualitative analysis of the cost parameters of regional vocational training activities;
- identification of cost/efficiency indicators, both physical and financial, and economic indicators of the "social value" of training;
- methods and procedures for vocational training cost/benefit and cost/efficiency analysis;
- analysis of evaluation and feasibility parameters and the criteria adopted by other countries and international organizations;
- "projects" training: suggested criteria for the evaluation of projects and their impact on the economic and social context (for example, by reference to EDF funding);
- formulation of methodologies for accurate costing and the allocation of costs to training ventures within the workplace;
- criteria for the evaluation of the internal and external returns from the employer's investment in vocational training;
- analysis of the impact of vocational training on personnel earnings and careers;
- substantial and formal evaluation of learning;
- regional criteria and the optimization of those criteria with a view to verifying the impact of training measures on employment.

The aim is to translate research findings into data to be used as a basis for public- and private-sector decision-making on training programme. The evaluation involved a survey of 500 people who completed the course. Information was gathered concerning the level of satisfaction with the course, achievement of course objectives, and benefits and outcome of the programme. The findings of the survey indicate a high level of satisfaction with the tutoring and the quality of training provided.

Computer Related Office Employment Study - Ref. No. 3

A study of computer-related technology and office occupations was completed in 1987. The overall purpose was to examine the present and future impact of computer-related technology on users in office employment in Ireland.

NEW PROJECTS

Women in Technology Workshop - Ref. No. 3

A pilot workshop training programme for Women in Technology commenced at the end of 1987. This one year programme is funded by the European Social Fund as an Innovatory Project. The programme aims to train 40 women to an advanced level in either Electronics or Micro-Computer Programming. On completion of the programme the participants will be able to seek employment in either the Electronics or Software Industries at a technical level.

A comprehensive evaluation of this programme is planned. The findings of the evaluation will be based on material

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10. Future priorities for training research and development

10.1 Priorities for ISFOL's research Sectors

Technical Support

Over the past few years, this Sector has consolidated its experience and capacity, particularly in the areas of training/employment, entrepreneurial training and transition-related services. Drawing also on the experience acquired by the regional authorities in technical support, it is to direct its own efforts towards identifying methodologies and instruments for the evaluation of training and labour policy measures.

Research on Occupations

Based on its consolidated body of research and experimental work on occupational trends, skills, categories of occupations and the problems of innovation (on occasions under Community programmes), this Sector is to press on with its efforts and establish links with various bodies in order to develop a teaching and institutional system directed towards the development of training for innovation.

QUESTIONNAIRE ON THE CONTINUING VOCATIONAL TRAINING MEASURES OF THE CHAMBER OF TRADE

Please leave blank

I.

NAME: ....

OCCUPATION: ....

STAFF MEMBER: EMPLOYEE .... CIVIL SERVANT..... .....

II.

1) Have you and/or your staff participated in continuing vocational training schemes offered by the Chamber of Trade in the course of the last two years?
(Multiple reply possible)

Owner/head of enterprise	Staff	
(1) .... YES	(3) .... YES	.....
(2) .... NO	(4) .... NO	.....

1a) If so, in which courses or seminars did you/your staff participate?

* Business management

Owner/head of enterprise	Staff	
.....	.....	.....
		.....

Please indicate ....
....
....

gathered from participants and the trainers through interviews, group discussions and survey questionnaires. The evaluation will be completed after the termination of the programme at the end of the year.

Expert Systems in Training - Ref. No. 4

The report of this research project has been drafted. The report reviews the development of expert systems and Artificial Intelligence and discusses their applications in training. The report will be published at the end of the year.

Development of Computer Based Training - Ref. No. 4

The development and integration of Computer Based Training methods and materials continues to be a priority in FÁS. The continuing research and development activities in this area include a project on Diagnostics based on electronic circuitry and an examination of the training implications of Flexible Manufacturing Systems. Other projects include Expert Systems in Training, a project on Learning to Learn using CBT, the development of audio-visual materials and the updating of training materials to meet the latest developments in technology.

Training of Trainers (CEDEFOP) - Ref. No. 5

This research project, commissioned by CEDEFOP began in 1987. It aims to examine and compare the skills needed and the skills possessed by in-company trainers of employed young people. The fieldwork involved a survey of in-company

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Labour Policies and Industrial Relations

Based on its consolidated body of research on the subject of industrial relations and the role of management and unions in training in the workplace, this Sector is to produce guidance for the social partners on innovation in training. It will also draw up procedures for participation in the planning and management of training with reference to local ventures, with due regard to the realities among small and medium-sized firms.

Experiments in training and the production of audiovisual aids

Projects have been set up over the past few years in connection with innovation in teaching methods, introducing new training technologies into training centres, establishing contact with teachers and regional practitioners and producing and distributing audiovisual materials. Based on these projects, the Sector is to produce information on innovation in teaching metods and training strategies, with particular reference to distance training and the training of trainers.

Institutional and legislation research

From its continuous documentation of national and regional laws on training and employment, and its experience in technical support for the drafting of regional legislation, this Sector should be able to make suggestions for legislation designed to regnerate vocational training, developing the necessary contacts with the leading training bodies and practitioners.

trainers and case studies. The data analysis of the survey has been completed. The final report will be prepared by CEDEFOP.

Operational Procedures Handbook in Programme Design - Ref. No. 6

A training design procedures manual for application to all training activities is being prepared. The objective of the manual will be to provide Training Design procedures to assist the development of balanced, systematic and effective training programmes. The manual deals with 'what has to be done' as distinct from the development of programme design skills or 'how to design'. It is planned to complete this manual by the end of 1988.

Comparison of Training Standards - Ref. No. 7

This pilot research project examining Training Standards was recently completed. Two reports, have been produced:

- Training Standards for Mechanical fitters, and
- Training Standards for Electricians.

These reports compare the training standards for Britain, Germany and Ireland.

Placement Monitoring System - Ref. No. 7

The Placement Monitoring System to gather information about trainees after programme completion was established in 1984. A survey of a sample group is conducted to gather information on the present occupational status of the

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Research on the labour market and vocational training

The basic knowledge that has been accumulated and refined over the past few years should help this Sector formulate outline hypotheses for the development of course typologies and indicate the various levels of courses, based on the upgrading of training. This should also be linked with guidance as to new opportunities for employment for young people and women in the light of an analysis of the transition period.

European Community measures

In providing technical support for the regional authorities and in cooperating with the Ministry of Labour on developing information resources and defining procedures for the setting up of projects, this Sector should pay special attention to the training methodologies that can be suggested as European Social Fund projects, possibly associated with innovation in training. It should also help to define a new approach for the system with regard to funding, costs and expenses.

Documentation

In view of the strategic role of information and documentation in any training system, as well as the need for higher quality information based on the user's viewpoint, the Sector is to plan projects - drawing on its own experience and research hypotheses - that will optimize the role of documentation and information in the training system.

person; the company employing him/her; their occupational status prior to the programme and their views on the benefits and quality of the programme. Because of the amalgamation of the manpower agencies the Placement Monitoring System is now being reviewed. The system is presently being examined in order to extend it to all FÁS employment schemes and training programmes.

Mechanical Engineering Sectoral Study - Ref. No. 9

This study of the manpower and training needs of the Mechanical Electrical Engineering Sector will be completed by end 1988.

Assessing Trainee Attainment: Principles, Guidelines and Practice - Ref. No. 9

This document aims to identify the main steps involved in designing a system for assessing trainee attainment. The project involves the establishment of basic principles, guidelines and practice for assessing trainee attainment on specific employable skills training programmes. These principles, guidelines and practice will, in the long-term form the basis of assessment and certification systems for FÁS programmes.

European Orientation Programme - Ref. No. 9

This programme aims to create employment opportunities in export marketing for graduates and to improve the European export capabilities of Irish companies. A follow-up survey of participating companies and graduates has been conducted to investigate the labour market experiences of the participants and to determine the value of the programme to the companies. A report of the findings will be completed by the end of the year.

Contribution of Training to Enterprise Development - Ref. No. 9

This study aims to evaluate the ways in which enterprise training contributes to the successful development of new businesses.

A survey of people who have participated on Start Your Own Business type training programmes has been conducted. The data collected will indicate the impact of training and other important factors relevant to starting a business. The information gathered will also be used to set up a database to provide an information source to those involved in training and enterprise development. The fieldwork for this study has taken place and the data analysis is on-going. The project will be completed by end 1988.

Survey of Providers of Management Education, Training and Development - Ref. No. 5, 9

This survey was commissioned by the Advisory Committee on Management and Training set up by the Minister for Labour in 1987. The objective of the survey is to establish the extent and scope of current provision of Management Education, Training and Development, (including non-qualification and qualification programmes) and to establish what providers consider are the current and future needs of Management Education Training and Development and their views on national policy in Ireland.

Integration of FÁS Services - Ref. No. 9

A review of all programmes and schemes currently provided by FÁS, the Training and Employment Authority will be undertaken during 1988. Based on this review, the Programme Planning, Coordination and Research Department will prepare proposals on the rationalisation and integration of existing programmes and schemes. These proposals will form the basis of FÁS's activities over the next three years and will aim to ensure that FÁS services are cost effective and client focussed.

Provision of Regional Information Project - Ref. No. 9

The aim of this project is to provide FÁS staff with up-to-date regional information which will be of assistance in the planning and organisation of local training and employment activities. Information gathered will include details of population, unemployment and employment levels, school and college provision, community initiatives etc. It is planned to provide this information through a database located in each of 10 regions to ensure ease of access. At present research staff are identifying the sources of information and designing a system to collate and present the data.

PROJECTS COMPLETED 1987

A study of the Manpower and Training Needs of the Chemical Industry - Ref. No. 9

This major study involved the identification of the future manpower and training needs in the Chemicals Sector and Allied Industries. This study took place over 3 years and investigated almost 300 companies. The final report, recently published, reviews the Chemical and Allied Products Industry in Ireland and outlines current developments. Training recommendations from technical to management levels are made for this sector of industry based on the research findings.

Engineering Education and Training in Denmark: Are there lessons for Ireland? - Ref. No. 9

A report on a study visit to Denmark was prepared by AnCO during 1987 on engineering education and training in Denmark. The findings of the study visit are important in terms of their application to the Irish engineering sector.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

ISTITUTO PER LO SVILUPPO
DELLA FORMAZIONE PROFESSIONALE
DEI LAVORATORI (ISFOL)

CEDEFOP
BERLIN
1988

1. Courses preparing young people for working life

The activities promoted by ISFOL under this heading are of two types:

1a - guidance;
1b - basic training.

1a For many years now ISFOL has been concerned with guidance, taking the practical form of various projects, the production of information material and measures designed to make teachers more aware of the issue. More particularly, in 1987 ISFOL embarked on a new course of action by trying out an entrepreneurial training module in nine technical colleges. This module was planned by a working party of experts and representatives of the working world. The teaching material used was produced in England and adapted to reflect the situation in Italy. Arrangements were also made to brief and train the teachers involved in the trial before it was launched.

1b A working party, on which all the national training agencies were represented, has been set up to create new attitudes towards training, especially basic training. The group has launched several lines of action. Within the sphere of the Regional authorities, new planning models are being drawn up in the light of the findings of experiments with the "vocational skill bands" project.

2. PRIORITY OBJECTIVES FOR ISFOL OBSERVATORIES

Launched in 1987, in the course of 1988 the Observatories are developing the preliminary findings from activities approved by the Board.

OBSERVATORY ON OCCUPATIONS

In the light of its general objectives and the activities that have been launched, the observatory is to supply data to be used in arriving at training policies on training preparatory to working life and at higher levels.

OBSERVATORY ON NEW OPPORTUNITIES FOR ACCESS TO WORK

Based on an analysis and assessment of various legislative instruments, including Law 56, ways of optimizing those instruments and defining effective, realistic opportunities for training are to be identified.

OBSERVATORY ON VOCATIONAL TRAINING

Through preliminary reconnaissance, it should be possible to devise methods for assessing the fitness and effectiveness of training agencies by laying down essential parameters. Work will also be continuing in liaison with the Regional authorities on homogeneous information-gathering procedures, to make the annual report on vocational training and the reports by individual Regions even more comprehensive and comparable.

OBSERVATORY ON LAWS AND REGULATIONS

Following an investigation of regional and national laws and regulations, thought is to be given to the arrangements they have created, powers delegated and agencies operating in this field, as well as possible new methods of organization.

OBSERVATORY ON THE TRANSITION BETWEEN SCHOOL AND WORK

Through an analysis of careers and the formulation of a typology of careers centred on the "training variable", hypotheses are to be formulated with a view to defining typologies of guidance, training measures and labour policies, with particular concern for work for women.

OBSERVATORY ON TEACHING METHODS

Through the systematic compilation of materials produced by the regional authorities and training agencies, information is to be gathered on current innovations, identifying the most effective methods for use in various types of measures; guides to methodology are also to be drawn up.

OBSERVATORY ON IN-COMPANY TRAINING

By finding out about the in-company training situation, possible developments for training can be defined, in the sense of training and the pooling of experience and attitudes among the various people involved in training.

4. The use of new technologies for training

Ventures in this field have taken the practical form of a series of projects, each one focussing on a specific sector of concern.

Following preliminary theoretical research, in the implementing phase the Omega project will verify the software for the creation of teaching units by arranging experimental seminars for sample groups of teachers. At the time of launching the Omega project in 1984, ISFOL worked with the Ministry of Labour on the Computer Literacy project for young people in the training system.

During that time, ISFOL worked on the updating of information technology applied to training designed for those teachers who were acting as tutors under the ministerial project.

ISFOL also coordinated the evaluation of materials produced by the various software houses involved at the time of the project.

In 1987, the Ministry of Labour also gave ISFOL the task of coordinating and assessing training experiments throughout Italy to update trainers in various subjects. The medium- and long-term aim is that ISFOL should set up a distance training service for those working in the system, compiling the most significant materials produced or forwarding them to users concerned.

Finally, a very recent project, Teseo, has involved research on simulation, using the computer as an aid in the training of trainers.

5. The training of trainers

The problem of the training of trainers is twofold: what exists and what is proposed. Typical of what already exists are a few projects, most of them set up by regions in Southern Italy in an effort to meet specific needs associated with industrial redevelopment. The role played by ISFOL in these projects is that of a critical observer. The proposals relate mainly to setting up a distance training system based on the use of multi-media materials and arrangements for the time and place of evaluation.

In distance training, one major element should be the telecommunication link set up by ISFOL with the regional authorities and potentially with vocational training centres.

Research has been launched to establish the training needs of trainers; this is being conducted by means of interviews with training practitioners and people with special knowledge and concern.

The training of trainers has always been viewed as a strategic factor in the innovation of training. In Italy it is linked with the terms of the new contract of employment for vocational trainers which has only recently been signed by the parties. At the September meeting it will probably be possible to give a more detailed picture of the new practical prospects arising from the application of that contract.

ISFOL is to work on measures coordinated with the regional authorities and training agencies in order to identify optimum forms of training, in-service refresher training and retraining for training practitioners.

Topic 6:
Development of training programmes

Nature of the project

In a context in which technological change is becoming increasingly rapid, the firms, and above all the SME s, are continually being forced to adapt to the new technological challenges and the resulting economic conditions. Aware of this situation, the Centre for Promotion and Research of the Chamber of Trade has conducted a survey among all the craft SME s in Luxembourg on their requirements in terms of continuing and further vocational training in both the economic and technological fields. The essential aim of this survey is to explore and more clearly define the needs of the SME s and their collaborators and as a result to offer this sector more targeted courses and seminars by adapting the further training courses already offered by the Centre for Promotion and Research and integrating courses and seminars on subjects of more specific interest to the firms.

Target-group

The target-group is comprised of the heads of enterprise and their collaborators of all the craft enterprises in Luxembourg.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

SERVICE FOR THE PROMOTION OF THE CRAFT TRADES
GRAND DUCHY OF LUXEMBOURG

CEDEFOP
BERLIN
1988

Topic I:
Transition from School to Work
Organization of a vocational preparation year

Nature of the project

In Luxembourg access to apprenticeship in a trade or occupation is subject to success in the final class of lower secondary technical and vocational education which lasts for three years and caters for the 12-15 age-group. In order to give a certain number of students who do not fulfill this condition for the commencement of an apprenticeship at the end of their compulsory schooling an opportunity to go through the transition from school to work with the assistance of teachers of general education and tutors teaching practical and manual skills in the schools, our Ministry of National Education has agreed to the organization on an experimental basis of special transitional courses called the "10th. transitional year", offering initial training in the occupations of electro-installer, heating and sanitary installer and car mechanic. These courses were established at the beginning of the 1987/88 academic year in conjunction with the manpower services, craft enterprises from the relevant trades and the Chamber of Trade.

Students who find an employer who can offer them a work experience placement sign a so-called "initiation contract" with this employer. They are entitled to a traineeship allowance, part of which is refunded to the employer by the employment fund.

Target-group

Students who intend to take up one of the trades offered, fulfilling the following criteria:

- they should show good manual skills;
- they should have shown a serious approach to their school work in the course of the previous years;
- they should not have been the subject of complaints due to non-justified absence from school;
- they should no longer be subject to compulsory schooling.

Duration

According to the legal provisions of the amended law of 27 July 1978 concerning various measures to promote youth employment, the duration of a work experience initiation contract may not exceed one year.

Methodology

Students having concluded an initiation contract with an employer are given a one-year period of training in the form of a sandwich course: two weeks of theoretical and practical training at school and two weeks in the firm. They are divided into classes of a maximum of 20 students according to the trade of their choice which operate as follows:

- half of the class works in the firm;
- the other half of the class follows.
  (a) theoretical training: 16 hours (units) per week;
  (b) practical training: 16 hours (units) per week.

Both training programmes are strictly geared towards the concrete requirements of the trade in question.

The practical training programmes are elaborated in conjunction with the tutors of practical and manual skills in the schools and the owners or managers of the enterprises with which the students have signed an initiation contract.

The main tasks of our organization are:

- to make the owners or managers of the firms more aware of the problems so that they can provide a better reception for the trainees;
- to coordinate the activities of the employment services, teachers, tutors and the firms in order to create fruitful collaboration among the various partners in the interest of the project in question.

Expected results

It should be noted that this vocational preparation year does not lead to any formal qualification; however it is hoped that at the end of the year the students will have a very good chance of signing an employment contract as an assistant craftsman with the employers who took them on under an initiation contract.

B) Reorganization of the observation and orientation cycle in technical secondary education

Nature of the project

The reorganization of the observation and orientation cycle is to emphasize the objective of the observation and orientation cycle in technical secondary education, both in the programmes offered and in the teaching methods applied, and to orient as many candidates as possible towards a recognized qualification, thus facilitating the transition of young people to working life.

Target-group

All youngsters aged 12 who, following primary school, have passed an admission test to continue their schooling in the observation and orientation cycle of our technical and vocational secondary education.

Duration

These studies last 3 years. In principle the first two years should be devoted to observation and the third year to the gradual orientation of the student.

Methodology

- change of the timetable with a marked increase in the number of lessons devoted to practical work and, in parallel, a reduction of the number of general lessons;

- in collaboration with the relevant chambers of trade, the elaboration of more substantial programmes for practical lessons;
- the reorganization of teaching in practical fields in order to give students an in-depth contact with the various occupational categories and therefore a better acquisition of the manual skills specific to an occupational category;
- the integration of the results of the practical and manual work into the promotion system with a view to making the transition from the final class to apprenticeships in the crafts and industry more flexible by means of an enlarged compensation system;
- improvement of collaboration between the world of work and the school.

Expected results

The implementation of the above-mentioned initiatives is to help to upgrade manual work and to provide students with a better orientation to enable them to chose a vocational training which corresponds to their real interests and abilities.

Topic 3:
Training in New Technologies:
CIM - Computer-integrated manufacture - in the SME s

Nature of the project

In view of the rapid development of computer-assisted functions, their integration in systems covering all the activities of the production of goods and the accessibility of these systems for the SME s, our organization is involved in the elaboration of specific training material on the introduction of this technology to SME s.

These activities are conducted in conjunction with the COMETT programme.

Target-group

Heads of enterprises and their managerial staff concerned with the introduction and utilization of computer-assisted production systems. The training material is to be translated into all the national languages of the European Communities and made available to all the manufacturing SME's of the EC via appropriate training centres.

Duration

The development of the training material shall be applied in three successive phases:

* preparation
* implementation
* evaluation and translation.

Each phase shall last approximately one year. The programme shall extend from 1 September 1988 to 31 August 1991.

Methodology

The development of the training material shall be conducted in conjunction with the Chambers of Trade of Luxembourg, Trier and the Saar.

A working party of these organizations shall coordinate the activities conducted by external bodies:

* the University of the Saar as far as the elaboration of the training programme is concerned;

* the University of Hanover, as far as the development of the teaching programmes, methods and documentation are concerned;

* selected national bodies for the translation of the material.

In order to ensure that the training is oriented towards the real situation in the firms, three pilot enterprises shall serve as experts/advisors in the elaboration of the material.

Evaluation

The objective of the programme being the development of training material, the tangible result shall be the launching of courses by the vocational centres as from the 1991/92 season.

Duration

The survey lasted approximately two months, whereby the evaluation phase is to be concluded by July so that the results can be integrated into the new continuing training programmes which begin in the autumn of 1988.

Methodology

The survey was conducted by sending a questionnaire to all the craft enterprises by post, along with a stamped reply form. The questionnaire, a copy of which can be found in the annex, permits an analysis of the degree of satisfaction of heads of enterprises and their collaborators with the further training seminars offered by the Centre for Promotion and Research and the determination of fields in which the firms have real needs in terms of continuing training.

Expected results

This survey and its evaluation are to permit the more specific orientation of continuing and further training seminars towards the real needs of the heads of enterprise and their collaborators, above all in the framework of technological change and the resulting economic conditions.

* Specialized technical seminars

Owner/head of enterprise .... Staff ....

.....

Please indicate ....
....
....

1b) If not, please indicate why you/your staff have not participated in the continuing vocational training schemes of the Chamber of Trade.
(Multiple reply possible)

.... The topics of the seminars offered do not correspond to our requirements .....

.... We do not have sufficient time for continuing training .....

.... The time of the courses is badly selected .....

.... The courses are in the wrong language .....

.... The registration fee is too high .....

.... We do not need continuing training .....

.... Other reasons: please indicate .....
....
....

2) Have you or your staff participated in continuing vocational training schemes offered by other national or foreign organizations or institutes?

Owner/head of enterprise	Staff	
(1).... YES	(3) .... YES	.....
(2).... NO	(4) .... NO	.....

2a) If so, where?

.... in Luxembourg	.....
.... abroad	.....

3) What courses and/or seminars would be of interest to you or your staff?
(Multiple reply possible)

* Specialized technical language courses

.... English	.....
.... French	.....

* Accounting

.... Balance sheet analysis	.....
.... Controlling	.....
.... Others (please indicate)	.....

....

* Finances/liquidity

.... Investment calculation .....
.... State subsidies .....
.... Leasing/factoring .....
.... Others (please indicate) .....
....

* EDP/computers

.... General introduction to EDP .....
.... Introduction of EDP in the firm .....
.... User-specific problems .....
.... Others (please indicate) .....
....

* Management techniques

.... Project management .....
.... Time management .....
.... Value analysis/optimization .....
.... Quality management .....
.... Others (please indicate) .....
....

* Personnel management

.... Incentive pay systems .....

.... Staff motivation .....

.... Others (please indicate) .....

....

* Marketing/Advertising

.... Marketing analysis .....

.... Successful advertising .....

.... Others (please indicate) .....

....

Technology

....Use of the computer in planning and production, technical drawing, steering, project coordination .....

....New materials
ceramics, composite materials, piezoelectricity .....

....Safety
equipment, provisions .....

....Environment
recycling, dangerous substances .....

....Energy
integrated systems, recycling, alternative sources of energy .....

....Others (please indicate) .....

....
....

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

CURRENT AND RECENTLY COMPLETED RESEARCH IN THE NETHERLANDS

CEDEFOP
BERLIN
1988

Pedagogisch Centrum Beroepsonderwijs Bedrijfsleven (PCBB)
(Vocational Education Research and Support Centre)

Verwersstraat 15
Postbus 1585
5200 BP 's-Hertogenbosch

A.F. Westerhuis

Stichting voor Onderzoek en Onderwijs (SVO)
(Foundation for Educational Research)

Sweelinkplein 14
2517 GK The Hague

Vakgroep Onderwijskunde
(Department of Educational Research)

Rijksuniversiteit Utrecht (RUU)
Heidelberglaan 1
3583 CS Utrecht

Dr G. Kanselaar

I. Transition from School to Employment

PCBB (1.1) Analysis of the causes of withdrawal from apprenticeships

Nature Research into the reasons for the relatively large numbers of broken training contracts in the Dutch apprenticeship system; recommendations for action to improve the situation.

Target group Management and staff of organizations providing training.

Duration Not yet fixed.

Methodology Comparison of two populations of apprentices ("stayers" and "drop-outs").

PCBB (1.2) Development of route whereby school-leavers can enter occupations using computers (ISI project)

Nature Creation of training provision (with 15 geographically dispersed training facilities) enabling school-leavers and unemployed youngsters to enter lower- and middle-grade computer-related occupations in the administrative field. Training is provided both in the educational institution and on the job (placements). The project is aimed at establishing an experimental training course and at preparing for the decision on the place of the programme, modified as necessary, in the Dutch education system.

Target group Policy-makers concerned with school-leavers and the young unemployed and industry.

Duration 1985-88.

Methodology Project management, execution and evaluation.

RUU (1.4) SVO-oa-6062 Secondary analyses of labour market census data

Nature Using Central Bureau of Statistics (CBS) data occupations are clustered into groups with a view to analysing links between occupational clusters and training. The study is to be completed with forecasts for the labour market.

Target group Policy-makers.

Duration Two years, from 1 December 1986.

Methodology Statistical processing of Central Bureau of Statistics data.

RUU (1.4) Intermediate Technical Education and work project (Utrecht University, Ministry of Education and Science, Ministry of Economic Affairs)

Nature Identification of discrepancies between the content of intermediate technical education (MTO) and job content in the area of information technology and digital systems.

Target group Former MTO students and their employers.

Duration 1986-87.

Methodology Interviews with and questionnaires completed by former MTO students and their employers.

Results For the group as a whole there is a p = .16 chance of their coming into contact with some aspect of new technologies in their work. In 43% of cases there was discrepancy between MTO and job content (job aspect not covered in MTO) and in 57% there was correspondence (job aspect covered in MTO).

SVO (1.5) SVO-oa-6065 Cohort study of school and work careers

Nature Using CBS survey data on a cohort which left primary school in 1965 and were studied in 1970, 1974 and 1978, a study is now underway into the correlations between education and work in the areas of employment/unemployment, choice of occupation, association between education and labour market needs, and job satisfaction and pay.

Target group All members of the relevant cohort.

Duration 1986-89.

Methodology Surveys.

SVO (1.6) SVO-oa-6065 Quality of the practical component of apprenticeships

Nature With the number of practical training placements being greatly expanded attention must be focus on their quality. What is the quality of the practical component in each sector, and by what factors is it determined?

Target group Apprenticeship system.

Duration 25 months from 1 December 1986.

Methodology A survey is being developed, on the basis of discussions and a study of the literature, to measure the quality of the practical component. Sample surveys are to be carried out among ex-apprentices (200-400 per sector). Some 15-20 case studies will then be carried out.

SVO (1.7) SVO-oa-6064 Practical component of apprenticeships

Nature An examination of the impact of industry's influence on education on the relations between education and the labour market. To this end the apprenticeship system, where industry's right to exercise influence has always been considerable, is being compared with Intermediate Vocational Education (MBO).

Target group Apprenticeship system.

Duration 1986-89.

Methodology Sample surveys are used to compare the employment patterns of ex-apprentices with those of former MBO students.

ITS (1.8) Job requirements in electronics at the Intermediate and Higher Technical Education levels

Nature A study of the changing content of jobs in the electronics sector under the influence of new technologies.

Target group Institutions of Intermediate and Higher Technical Education.

Duration To September 1988.

Methodology Surveys.

RION (1.9) Research into the apprenticeship system I: comparative study of the subsequent careers of former apprentices and former Intermediate Vocational Education students

Target group Apprenticeship system.

Duration To 1 March 1989.

Methodology Study of the literature; selection of six apprenticeship courses; description of the six selected training sectors; career surveys (written survey, 150 students per course); analysis.

II. Training for the longer-term unemployed

PCBB (2.1) Development of channels linking the long-term unemployed with unmet demand on the labour market
Nature Development of an instrument for the identification and analysis of jobs which could be performed by the long-term unemployed.
Target group Policy-makers.
Duration July 1987 - November 1988.
Methodology Development of instrument and occupational analysis.

III. Training for new technology

PCBB (3.1) Review of developments in logistics and their impact on occupational practice
Nature Analysis of the extent to which the courses offered by apprentice training institutions take account of new developments in logistics in their occupational sector.
Target group Policy-makers.
Duration To summer 1987.
Methodology Interviews/surveys.

PCBB (3.2) Survey of developments in information technology and their effects on job content

Nature Analysis of the content of jobs done by former participants in the ISI project (see 1.2) and forecast developments in these jobs in the areas of administrative, programming, planning and documentation activities and the acquisition of hardware and software with a view to improvements in the training programme.

Target group Policy-makers.

Duration February 1987 - June 1987.

Methodology Occupational analysis (interviews/surveys).

PCBB (3.3) Impact of new technologies on documentary information services in government departments

Nature Occupational analysis relating to the substantive and organizational consequences and the use of new technologies such as computers, digital data storage, videodiscs etc. in government offices, archives and library and documentation services and the translation of the results into a modular training course.

Target group Policy-makers.

Duration 1985-87 (completed).

Methodology Occupational analysis (interviews/surveys).

SVO (3.4) SVO-oa-5530 Survey of company training schemes

Nature There is no central register of company training schemes in the Netherlands. A clear picture of adult vocational training requirements is needed if the right policy choices are to be made.

Target group Company trainers.

Duration Two years from 1 February 1986.

Methodology After compilation of an address list sample surveys and interviews with key figures are used to chart recent developments. Thereafter shortcomings are analysed by means of case studies.

COB/SER, RRV (3.5) Sector training

(carried out by Organisatiebureau Bakkenist, Spits & Co)

Nature Providing assistance with the design and organization of training schemes for particular sectors of industry.

Duration 1987.

Methodology Interviews and surveys.

SVO (3.6) SVO-OIT-5539 Regional hardware policy in Intermediate Technical Education

Nature Study of the operation of the regional hardware centres in training in new technology and of the part which instruction and simulation hardware can play in learning to work with professional computer numerical control equipment.

Target group Intermediate Technical Education.

Duration Two years from 1 April 1986.

Methodology Study of the literature, half-structured interviews (n = 20).

SVO (3.7) SVO 6061 Selection policies of employing organizations

Nature What changes are taking place in qualifications requirements as a result of technological innovation? Are the selection policies of employing organizations changing as a result, and are educational qualifications of relevance?

PCBB (3.8) Development of a new kind of job in electronics
Nature Developments in the area of electronics and information technology have a considerable impact on the content of existing jobs and the growth of new ones. In various quarters a trend has been noted towards the integration of several disciplines (e.g. mechanical engineering, information technology and electronics) in one job. This trend will undoubtedly have consequences for the qualifications required, and training organizations will need to respond to these. Against this background the Association for the Promotion of Electrotechnical Training (VEV) decided to commission a study of advanced firms and institutions in the Netherlands. The purpose of the study, which is being carried out by the PCBB, is to determine the need for jobs/courses integrating several disciplines. On the basis of the information obtained the VEV intends developing courses to meet this need.
Target group Association for the Promotion of Electrotechnical Training (VEV).
Duration To the end of 1988.
Methodology Market analysis.

PCBB (3.9) Market analysis: energy technologist
Nature The Hogeschool Zeeland, a technical education institution, has developed a training course for energy

technologists and has asked the PCBB to determine, through a market analysis, the current content of this job. The study will also identify current and imminent developments in energy technology and related fields (energy generation and distribution and environmental technology). In this way training courses in energy technology can be kept in line with developing requirements.

Target group Hogeschool Zeeland management.

Duration To the end of 1988.

Methodology Market analysis.

ROA (3.10) Towards a new information system for education and the labour market

Nature The Research Centre for Education and the Labour Market was established in the summer of 1986. This was made possible by a five-year (1986-91) research contract from the Ministry of Education and Science involving the development of an information system capable of charting developments in the labour market and the educational and training needs which flow from them. The system is to be used for educational and vocational guidance purposes in secondary and higher education.

The system must meet certain criteria. The first is that it should provide information for use in educational and vocational guidance to students in secondary and higher education, though the information generated may also be of use in answering questions of other kinds on the relationships between education and work (concerning e.g. ways of improving the match between educational provision and students' employment prospects and of structuring the

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economic potential in such a way that greater benefit can be derived from investments in the public's knowledge and skills).

Second, the information generated must be quantitative in nature, indicating the changing patterns of employment in the various sectors of the labour market, the changing structure of the workforce, the movement of students through the various sectors of the education system, and so on. In the initial stages at least the system will not be required to generate qualitative information on e.g. the content of the jobs available or the training received.

Third, full use must be made of the quantitative data already available and of existing knowledge in order to supply the information needed. In addition to the establishment of a databank and the development and/or linking together of econometric models, the information system will therefore also involve building up a network of contacts with agencies able to make a contribution in the form of information and know-how.

The fourth and final criterion relates to the operating life of the information system. This is not a one-off exercise in deriving new forecasts of future developments in education and the labour market: the purpose is rather to develop a durable instrument capable of generating the information required at regular intervals and on the basis of current thinking.

PCBB (3.11) Training needs in the textile industry

Nature A study of developments in the Dutch textile industry (markets, products and services; production technology; organization of the production process; job patterns; job content; training activities), their consequences for labour requirements (both qualitative and quantitative) and their implications for the industry's training policies. The study was commissioned by the Council for the Textile Industry.

Target group Employers and trade unions in the textile industry.

Duration To July 1988.

Methodology Market analysis.

RRV (3.12) Project management: Information Technology Promotion Plan (INSP) for vocational education, with assistance from the Higher Vocational Education sector

Target groups National bodies, the apprenticeship system, Intermediate and Higher Vocational Education, firms.

Result Improved match between current labour market requirements and vocational education; some 80 projects with a total value of 150 million guilders.

Duration Four years to 1 January 1989.

RRV (3.13) Workshops: new technologies, a link between industry and vocational education

Target group Principals and teachers in Intermediate Technical Education and managers and training officers in industry.

Objectives Seven meetings:

a. to give invited firms a picture of what Intermediate Technical Education students learn about new technologies,

b. to promote the exchange of information between industry and education in the area of future-orientated learning programmes,

c. to encourage regional and local collaboration between industry and educational institutions.

Duration One year.

ITS (3.14) Technological development and substitution

Nature Research into the associations between technical developments and technology and substitution in the labour market and shifts in the qualitative profile of Higher Technical Education engineers.

Target group Higher Technical Education.

Duration To mid 1988.

Methodology Empirical research, programming.

TU (3.15) Office automation, research geared to curriculum development

Nature Regional survey of training needs and employment in office work.

Target group Individuals qualified to Intermediate Commercial Education level who are unemployed or whose jobs are at risk.

Duration To spring 1988.

Methodology Curriculum conference.

Results Employers recognize the need for additional training; the individuals concerned perceive a greater need for additional training than do their superiors (who do not see the problems); there are discrepancies between initial training and current job requirements (the updating problem).

CBS, TU (3.16) Company training schemes in the Netherlands

Nature Survey of characteristics (courses available, participation, costs); identification of trends in policy and management; analysis of educational shortcomings in training courses; follow-up research proposal in place of programmed study.

Target group Firms operating training schemes.

Duration Two years to mid 1988.

Methodology Sources, surveys, interview panel of 21 experts.

Results Numbers of schemes and participation are tending to increase; trend towards job-specificity; trend towards technology (automation and computerization) and management.

TU (3.17) Practical problems in prevocational education (follow-up to BAVBO)

Target group Persons concerned with production technology in Intermediate Technical Education.

Objective (1) Development of production technology curriculum, (2) research into regional hardware centres, (3) determination of the hardware configurations that produce the best result in relation to computer numerically controlled equipment.

Duration (3) above is still in progress.

Methodology Curriculum conference.

Results Effectiveness of the curriculum conference as a method.

ITS (3.18) Significance of technological developments in the production sector and services

Nature Coupling of theoretical discussion of vocational education with that of the significance of technological developments for the division of labour.

Target group Researchers and policy-makers.

Duration To 1 June 1988.

Methodology Study of the literature; development of theoretical model; development of research instruments; discussions with researchers into vocational education and (information) technology in the Netherlands and abroad.

ITS (3.19) Research into the apprenticeship system II: Quality of the practical component of apprenticeships

Nature Survey of variants in practical training placements; discussions with key figures; written survey of national training bodies.

Target group Apprenticeship system.

Duration To 1 February 1989.

Methodology Case studies (15-20 training place settings); (participatory) observation.

IV. Use of new technology

RRV (4.1) Feasibility study into the introduction of CD-ROM in the final years of University Education and Higher Vocational Education

Target group Final years of University Education and Higher Vocational Education.

Results Invitations for CD-ROM technologies, University Education and Higher Vocational Education; creation of demand in firms and institutions through University Education and Higher Vocational Education.

Duration Netherlands, 3 months; Europe, 2 years.

RRV (4.2) Evaluation of courseware activities within the INSP target group: INSP funding agencies

(Ministry of Education and Science, Ministry of Economic Affairs, Ministry of Agriculture and Fisheries)

(INSP = Information Technology Promotion Plan)

Objective Scope for organization of courseware development for Primary Education, Secondary Education and Lower and Intermediate Vocational Education.

Result How further courseware activities are to be planned after the INSP from 1 January 1989.

Duration Three months.

V. Training for trainers

(5.1) In-service training in new technologies (NABONT project)

(Ministry of Education and Science, INSP)
Nature A large-scale in-service training project in the area of new technologies for teachers in (mainly Intermediate) Vocational Education.

(5.2) Computers in secondary education (NIVO project)
Nature Under the NIVO project, on which the Ministry of Education and Science is collaborating with three computer firms (Philips, Tulip and IBM), three teachers from every general secondary and lower vocational school are receiving in-service training with a view to giving every student in secondary education the opportunity of using computers in practical applications.

RRV (5.3) Intensification of training by educational institutions (ISO project)
Target group All mainstream vocational education.
Results (1) Creation and promotion of contract teaching relating to small and medium businesses, (2) creation of employment for unemployed teachers.
Duration Three years.

VI. Training-curriculum development

TU (6.1) Comparison of modular and traditional approaches
Nature Comparative study of modular and traditional forms of teaching in vocational education.
Target group Vocational education.
Duration 1988-89.

VII. Evaluation methods

PCBB (7.1) Evaluation of the qualitative and quantitative match between educational provision and job requirements in tourism and leisure

Nature Analysis of the structure and content of current and future occupations in the tourism and leisure industry with a view to updating Intermediate Vocational Education provision in this area.

Target group Policy-makers.

Duration 1987-89.

Methodology Occupational analysis.

PCBB (7.2) Evaluation of the qualitative and quantitative match between educational provision and job requirements in agriculture

Nature Analysis of the structure and content of occupations in agriculture (including arable and livestock farming, the food industry, landscape management, forestry and amenity horticulture) with a view to updating Intermediate Vocational Education and apprenticeship provision in this area.

Target group Policy-makers.

Duration 1987-91.

Methodology Occupational analysis.

PCBB (7.3) Participation by women in information technology courses (in collaboration with TU)

Nature Research into the low level of employment of women in information technology and its nature and causes, and the development of recommendations aimed at narrowing the gap. The study focuses on the jobs created in the framework of the ISI project (see 1.2).

Target group Policy-makers.

Duration To summer 1987.

Methodology Surveys and interviews.

SVO (7.4) SVO-oa-6063 Effects of the "naive" approach to tailoring training courses to employment needs

Nature Course content is increasingly often determined on the basis of occupational profiles, the "naive" approach. This study compares different methods that can be used for this.

Target group Persons concerned with the development of occupational profiles.

Duration 1986-98.

Methodology Study of the literature, document analysis, respondent survey (study of the users of documents) and expert conference.

VIII. Training for the management of technical change

IX. Other important research and development projects not in the CEDEFOP list

PCBB (9.1) Desirability of merging vocational guidance organizations

Nature Assessment of the desirability of merging institutions concerned with educational and vocational counselling and information for school-leavers on the one hand and a coordinating Contact Centre for Education and Employment on the other.

ITS (9.2) Technological developments relating to the selection policies of employing organizations in a framework of occupational theory

Nature Preliminary study for the Foundation for Educational Research (SVO).

Duration To the end of 1988.

Methodology Study of the literature and interviews.

Abbreviations

CBS	Centraal Bureau voor de Statistiek (Central Bureau of Statistics)
COB/SER	Commissie Ontwikkeling Bedrijven, Sociaal-Economische Raad (Industry Development Committee of the Socio-Economic Council)
ITS	Instituut voor Toegepaste Sociologie, Nijmegen (Institute of Applied Sociology, Nijmegen)
PCBB	Pedagogisch Centrum Beroepsonderwijs Bedrijfsleven (Vocational Education Research and Support Centre)
RION	Research Instituut voor Onderwijsonderzoek, Groningen (Institute of Educational Research, Groningen)
RRV	Bureau Riphagen, Reiche en De Vos, Scheveningen
ROA	Researchcentrum voor Onderwijs en Arbeid, Maastricht (Educational and Occupational Research Centre, Maastricht)
RUU	Rijksuniversiteit Utrecht (Utrecht State University)
SVO	Stichting voor Onderzoek van het Onderwijs (Foundation for Educational Research)
TU	Technische Universiteit Twente (Twente Technical University)

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

INSTITUTO DO EMPREGO E FORMACAO PROFISSIONAL
IEFP (PORTUGAL)

CEDEFOP
BERLIN
1988

INSTITUTO DO EMPREGO E FORMACAO PROFISSIONAL

INTRODUCTION

The Instituto do Emprego e Formação Profissional (IEFP) is a Portuguese organization responsible to the Ministry of Labour and Social Security with the authority to execute employment and vocational training policies defined and approved by the Government.

In order to fulfil this task the structure of the Instituto do Emprego e Formação Profissional provides for five regions which are responsible for 60 employment centres and 40 vocational training centres, 25 of which are managed jointly by representatives of the IEFP and the social partners.

With the object of increasing its training capacity the present centres are being modernised and 50 more are being constructed, 10 of which receive pre-Membership aid.

A significant proportion of the Institute's activities is therefore taking place in association and co-operation with other public or private organizations with the aim of making better use of resources available and in an attempt to increase cooperation between the various participants in areas as important as employment and vocational training.

1. TRANSITION SCHOOL/EMPLOYMENT

Project:

Supervision of entry into working life

Organization involved:

Implementation of this project will involve the central and regional structures of the Ministries of Education and Employment, the regional co-ordination committees of the Ministry of Home Affairs, Universities and Polytechnics, the National Apprenticeship Committee and respective regional committees and any others which may be required.

Objectives:

These are:

- To obtain up to date detailed information on the entry of young people into employment, particularly in respect of the relationship between training received and qualifications required to obtain employment and develop vocational careers.

- To study the effect of educational reform.

- To implement a programme of study and investigation to assist in understanding these circumstances.

- To publish all information collected.

Potential Trainees:

Students who have completed their education and apprentices who have completed IEFP vocational training courses and apprenticeship.

Methods:

A survey, by post and/or interview, will be carried out over a short period after training (survey into obtaining jobs) or after a longer period (retrospective survey)

Results Expected:

The information received will enable:

- Standardisation to be made of qualifications acquired in relation to those required, thus assisting in the preparation of curricula and the naming of qualifications;

- Further information required for educational and vocational guidance to be obtained.

- An assessment to be made of the effects of reform on the quality of education and assistance to be provided for decision-making departments and centres in reformulating the educational and employment policy.

Project:

Young technicians for industry.

Organization involved:

Implementation of the project involves the Laboratório Nacional de Engenharia e Tecnologia Industrial (LNETI), the IEFP, Associação Industrial Portuguesa, Associação Portuense, Instituto Apoio às Pequenas e Médias Empresas (IAPMEI) e Secretaria de Estado de Juventude.

Objectives:

The following are the objectives of the project:

- To provide young people with post-educational training in selected areas and direct contact with the industrial world.

- To increase the technical capacity of small and medium enterprises through:

  - better qualifications of their personnel
  - the use of new technology
  - the development of new methods and products

Potention trainees:

Young people who have just graduated or obtained diplomas

Methods:

The project, which covers two years, is divided into the following stages:

- One month training at a Centre.
- Three months training in a training enterprise (in which the latest technology and management techniques are used) supervised by a technical supervisor.
- 20 months working in an enterprise.

Results Expected:

- An increase in the number of technical staff in enterprises by improving technical qualifications.

- A reduction in the social problem of youth unemployment.

2. TRAINING FOR LONG TERM UNEMPLOYED

Project:

Training of long-term unemployed.

Organization involved:

The project is implemented by the Instituto do Emprego e Formação Profissional (IEFP).

Objectives:

Implementation of further training, rehabilitation or retraining courses aimed at assisting candidates to return to productive employment.

Potential Trainees:

Unemployed workers of over 25 registered at employment centres and receiving unemployment allowance.

Methods:

The project will consist of the following stages:

- Assessment of the unemployed by means of vocational tests (practice, theory etc.).
- Formation of groups of similar abilities, etc.
- Preparation of specific theoretical and practical programmes tailored to the requirements detected.

- Holding courses at the Vocational Training Centres using methods based on experience, interests and motivation of the participants.

Results Expected:

Employment obtained by a high percentage of trainees on completion of training.

Note; A trial is at present in progress covering Metal Working, Electricity and Building Construction involving 100 participants whose average age is over 40, a considerable proportion of whom were guaranteed employment at the outset and some of whom will become self-employed.

3. TRAINING IN NEW TECHNOLOGY

Project:

Training modules for the introduction of new technology into productive sectors.

Organization involved:

The project will be organized by the Laboratório Nacional de Engenharia e Technologia Industrial (LNETI).

Objectives:

The preparation of suitable training programmes to reduce the imbalance between demand (new vocational profiles) and supply (school and extramural training).

Methods:

The project will encompass several stages;

- Identification of vocational training requirements as a result of technological innovation.
- Survey of training currently available (school and extramural organizations).
- Implementation of courses in technologically advanced areas such as:
  - Biotechnology in the pharmacutical industry in Portugal.
  - Nuclear methods in agriculture
  - Energy management in industry.

- Technology of the use of natural gas.
- CAD/CAM operators.
- Use of lasers in industry.
- Use of robots in industry.
- Bio-chemical engineering.

Results Expected:

Although these courses are open to other people, they are mainly attended by young people, who will make an important contribution to the introduction of new technology in industry and for whom the courses will provide better opportunites of employment

4. USE OF NEW TECHNOLOGY IN TRAINING

Project:

Study of new teaching methods.

Organization Involved:

The project will be implemented by LNETI.

Objectives:

To provide expertise and study the advantages and disadvantages of new teaching methods, especially distance learning and computer assisted teaching.

Methods:

The study of the specialist terminology.
Application of the module in training activities
Standardisation of activities using new training technology.

Results Expected:

To provide teaching methods suitable for each case, taking into consideration the nature of the programme to be implemented and those for whom it is designed, paying particular attention to training content:

Project:

Training activities using new technology.

Organizations involved:

The project is to be implemented by LNETI with assistance from the IEFP and will be integrated into the EUROTECNET network.

Objectives:

Implement training activities using distance learning with a view to satisfying training requirements without the use of a centre.

Activities in the first stage will relate to the Introduction to Computing followed by Time and Motion Studies.

Potential Trainees:

Anyone is eligble for this form of learning irrespective of his/her position.

Methods:

The following stages will be required in the preparation of materials for distance learning:

- Preparation of content
- Adaptation of terminology
- Filming/production
- Computer graphics
- Cutting/post-production

Results Expected:

To provide access to training in new technology for those living in sparsely populated areas.

5. TRAINING OF TRAINERS

Project:

New methods for training trainers.

Organization Involved:

The project is implemented by the IEFP.

Objectives:

A new project defining the objectives, resources and stages required for implementing a new adaptable self-contained method for the individual training of trainers.

Potential Trainees:

IEFP trainers and others

Methods:

Design and implementation of programmes tailored to the entry profiles of participants.

Establishment of individual training projects taking into consideration the requirements and interests of each participant. Training alternates between:

- Individual programmes and periods devoted to groups.
- The CNFF, enterprise and the Vocational Training Centre.

Training also makes provision for the systematic use of written, audio-visual and computer aids.

6. UPDATING TRAINING PROGRAMMES

Project;

Updating vocational training programmes (Modular Training).

Organization Involved:

The project is implemented by the IEFP with participation by the social partners.

Objectives:

These are:

- Modernisation and adaptation of the training system to suit the requirements of the employment market where vocational qualifications are now becoming increasingly diversified as a result of the constant technological revolution.
- Designing a new training programme organization to provide the most extensive initial training possible, enabling basic and complementary qualification options to be offered in training alternating between the training centre and enterprise.
- The introduction of a viable system of continuous training.

Potential Trainees:

The programmes will be for young people and adults attending Vocational Training Centres to obtain vocational training or further training qualifications

Methods:

The project will last 2 years; the restructuring period and extension of the present IEFP Training Centre network will require the following stages:

- Processing of vocational analysis data and definition of profiles in the Metal Working, Electricity/Electronics, Building Construction, Refrigeration and Air Conditioning and Motor Repair sub-sectors.

- Determination of common training frameworks based on vocational areas and respective levels of qualification in each area.

- Preparation of a file on each area and respective vocational qualifications (basic programme).

  - Definition of training objectives in terms of final ability.

  - Definition of training content in relation to objectives.

  - Definition of levels of training

  - Definition of standards of assessement/certification

- Approval of file by the tripartite committee

- Design and preparation of learning/teaching resources for the trainee and the trainer.

- Definition of resources for assessment of teaching and equipment and materials required for training.

- Trial and assessment.

- Generalization.

Results Expected:

- Providing young people and adults with or without vocational training and/or vocational experience with access to vocational training.

- Training in the first stage about 80 persons at levels 2 and 3 of the European Community.

PROMOTION OF COOPERATION
AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS
IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING

13-14 SEPTEMBER 1988

NATIONAL RESEARCH AND DEVELOPMENT PROJECTS: SPAIN

CEDEFOP
BERLIN
1988

1. TRANSITION SCHOOL TO EMPLOYMENT. INITIAL TRAINING

1.1. Last February the Ministry for Education and Science presented the document "Draft Reform of Technical/-Vocational Education - a Proposal for Debate" within the context of the proposed reform of the educational system. This completes the profile of the compulsory and post-compulsory secondary cycle and lays down the lines for the sub-system of technical/vocational education - a field in which the reform is more incisive as compared to the present situation.

If viewed as a whole, the new configuration in the areas of training and skills in the secondary cycle stands out prominently. The inclusion of the new objectives of preparation for working life with technological education in the final stage of the compulsory cycle (14-16 years) and the differentiation in post-compulsory education between basic vocational training (included in the three envisaged sections of the Baccalaureate) and specific vocational training as the central body of the sub-system of technical/-vocational education, bring about a balance between learning objectives and contents, thus releasing vocational training, in the narrow sense of the term, from unnecessary tasks. The model presented by the Ministry of Education and Science based on the concept of specific vocational training, which is conceived as a bridge between the school and the enterprise, has selected a flexible form of training which can be adapted to the requirements of the social and industrial system and the characteristics of the local or regional environment. Training takes the concrete form of vocational modules whose levels of qualification are adapted to those laid down by the European Economic Community, a classification which is taken to regulate the sub-system of technical/vocational education.

The new model contains important implications which, at the moment, are the subject of analysis, debate and experimentation (in particular, the vocational modules for Levels 2 and 3).

The publication of a document on Planning of the Reform is envisaged for the end of autumn.

1.2. A large number of the studies on transition from school to employment will be situated within this context. The Centre for Educational Research and Documentation (Centro de Investigación Educativa y Documentación - CIDE) of the Ministry of Education and Science has already launched and is at present coordinating several research projects within the programme "Education, training and employment in Spain in the 1990s".

Among the finalized projects, "The adequacy of training for employment in the vocational training system: present status and perspectives of the experience of the contractual relationship between educational centres and enterprises" analyses the scope and the value of the experience of training contracts and agreements for the implementation of practical vocational training, and studies its contribution to the adaptation of training content to technological and organizational change and to a smoother transition to employment. This study proposes measures for the restructuring of this path with a view to making it a formal structure within the Reform of Technical/-Vocational Education.

A second project which has also been finalized, studies the reform of the Baccalaureate and the role of basic vocational training and its effects on the labour market.

The study "Transition from school to employment" which has a more psycho-social orientation, tackles the processes of transition as a key factor for aid and guidance in educational and employment policies. The school system and youth as a social group are studied from the perspective of a sociology of transition. The objectives of this research are to set up a typology of transition paths from infancy to adult life, to which a typology of the psycho-social adaptation of young persons to the distinctive situations and processes of transition will be added.

In "The integration of specialized vocational training technicians in the labour market. A comparative analysis", the forms of transition from school to employment are studied in the case of specialized vocational training technicians entering local labour markets in the process of extensive industrial change.

Finally, "Education to develop initiative" tries to identify the psycho-sociological components of the capacity for initiative and the extent to which practical training in this field may be considered an efficient means of action to overcome the difficulties of integration into working life and changes in the working requirements. The study analyses the capacity of the educational system to promote and develop a sense of initiative, and suggests various measures to introduce and, if necessary, improve training and other activities directed towards this end.

1.3. One of the public employment/training programmes which fall within the double context of transition to working life and local employment initiatives is the recently created "House of Trades" (Casas de Oficios) scheme which is intended as a complement to and a generalization of the Schools-Workshop programme, initiated in 1985; both programmes are administered by the Ministry of Labour and Social Security through INEM. The objectives of these programmes are to promote and consolidate local heritage, urban renewal and better housing; they also have the aim of improving the training and professional experience of unemployed youth with gaps in their training by providing alternating training and employment. They integrate almost all promotion measures for employment and training in a coordinated form, and constitute - in the case of training - a source of innovation and experimentation, and - in the case of promotion of employment -, a factor contributing to the emergence of new activities. Each School-Workshop or House of Trades corresponds to a defined project for intervention at the local level.

3. VOCATIONAL TRAINING / NEW TECHNOLOGIES

3.1. The FUNDESCO Foundation has just published the report of a group of experts on "Information technologies and vocational training in Spain" which is interesting because of its analysis and diagnosis of the situation in Spain and the list of recommendations it makes for research into the new technologies which affect vocational training, the training of trainers, the production of multi-media teaching material and the promotion of open training.

One of the most urgent problems in the introduction of the new information technologies in Spain is the lack of qualification of the manpower and, more specifically, gaps in the provision of training.

The report explicitly underlines the problems inherent in training for the new technologies and pinpoints several deficiencies both in the educational sector (in which programmes for the integration of the new technologies have existed for years, e.g. "ATENEA") and in the working world.

In the field of "occupational" vocational training "the situation of technological education in Spain is characterized" - according to the authors of the study - "by a level of theoretical and experimental research and avant garde experimentation which may not be outstanding but is acceptable, in contrast to the still low level of significant applications with a social impact, economic repercussions and other effects".

Other interesting studies are the analysis of the social innovation processes and the review of the most important Spanish experiments which have been examined as models capable of generalization because of the degree of their development in the Spanish context.

3.2. Observation of the demand for training in the new technologies is one of the main lines of action of the Permanent Monitoring Unit for Occupations which was set up recently by the National Institute for Employment. In this context INEM is developing a new line of work "Impact of the new technologies on the occupational structure" whose objectives are to identify the changes induced by the new technologies in the content and the configuration of specialized activities and occupations in the different occupational categories, and their effect on the decline or creation of jobs. The study consists of two phases, the first of which has been completed and was carried out by groups of experts in the various occupational fields of INEM who analysed the most significant changes in all the 47 occupational categories.

The second phase will consist of contrasting and checking the results of these studies by sending out a questionnaire to a large sample of firms.

4. USE OF NEW TECHNOLOGY IN TRAINING

4.1. INEM is developing an investment programme to reform training plans and modernize teaching teams and training staff, which consists of the following activities:

a) Programmable automats (15 teachers) for the training of technicians and skilled workers who can undertake the inspection and maintenance of industrial installations; this is intended to complement and reform the courses in Industrial Electricity, Hydraulics and Pneumatics.

b) The inclusion of digital techniques and microelectronics in the courses on Electronics.

c) Updating of the courses on Mechanical Engineering by introducing CNC, CAM and CAD techniques.

d) The establishment of new 40-hour training modules with the creation of Classes for Support in Administration and Management (69 teachers) and Technical and Industrial Specialization (20 teachers).

e) The inclusion - parallel to Electronics, Automation, Informatics and Communications - of a new line, the Technology of Training, intended for INEM's training staff within the CEFAT project (Centros de Formación en Avanzadas Tecnologías - Centres for Training in Advanced Technologies).

5. TRAINING OF TRAINERS

5.1. Last year INEM conducted a survey covering the entire teaching staff of the Occupational Training and Integration Plan with the aim of identifying and evaluating the potential of the actual network of trainers. The survey, entitled "Trainer Profile" covered a sample of 1107 trainers in "occupational" vocational training using two questionnaires drawn up for this specific purpose. This survey resulted in the validation of the instruments used for selection and diagnosis of training needs and the establishment of an updated register of trainers and experts.

5.2. At the same time two programmes were designed for the training of trainers:

a) "Use of interactive video in the Basic Trainer Training Course".

b) In collaboration with the National Distance Learning University (UNED - Universidad Nacional a

Distancia) a "Training course on the image" whose objectives are to give training in the reading and critical interpretation of the image and its pedagogics. The course will be held in the form of open training and the concept includes the implementation of a pilot scheme with 30 teachers.

The training package will consist of 3 videos, 2 audio tapes, 2 text books, a teaching guide and telephone tutorials.

6. TRAINING CURRICULUM DEVELOPMENT

6.1. As written in last year's report, the Ministry of Labour and Social Security is developing - through the Directorate-General for Employment - a systematic and regular research scheme to examine macro-social elements and trends, whose main lines of action will be the following:

Annual survey of employment and vocational training needs. This survey covers a sample of 2000 firms at national level in the sectors of industry, construction and services, conducted by means of personal interviews and questionnaires to the managers responsible for human resources. The general objectives are to identify the needs in employment and training, changes in the structure of employment, the effects of the new technologies and management techniques and internal training policies of the firms.

Evaluation of the training activities contained in the National Occupational Training and Integration Plan with the aim of getting to know the labour aspects in the training courses in terms of occupational integration, occupational advancement and amelioration of income. The survey covers a fixed sample of 2000 former trainees together with another complementary control group with a reduced sample.

6.2. Among the projects conducted by the Directorate-General for Employment, mention must be made of the study, already completed, on "Recruitment and training policies in Spanish firms"; this was undertaken as a survey and the field work was done in March/April 1987. The sample covers 2000 firms, divided by size into five groups and distributed according to the relative weight of total employment at each level. The results reveal some important aspects of the functioning of the labour market (actual frequency of temporary contracts, hierarchization of the methods used by the firms to adjust the staff, business practices in the field of temporary recruitment). As far as the training policy of the firms are concerned, 52% of the interviewed firms said that they carry out training activities, proportionate to their size, ranging from 24% of the firms with less than 10 employees to 92% of those with more than 500 employees. Most of the objectives followed by the firms are generally related to continuing vocational training and the upgrading of skills; 50% are related to the adaptation of recently recruited workers to the methods and organizational systems used in the firm, and 43% deal with organizational changes. The firms which make use of the programmes of the Occupational Training and Integration Plan generally find these very useful.

6.3. In addition to the studies undertaken by the Directorate-General for Employment, INEM has recently set up a "Permanent Monitoring Unit for the Evolution of Occupations"; one of its objectives is to compile all the information on developments in the labour market - this includes information received from internal sources through permanent surveys and the network of employment offices, and the information obtained from an analysis of external sources, especially the Survey of the Labour Force, and the vacancies advertised in the press at national level.

At the present moment trends on the labour markets of the provinces and the "Autonomous Communities" are being studied on the basis of the occupations most in demand and the advertised jobs which are not filled; there is also a study of the development of demand and supply by occupational category, and the impact of the new technologies on changes in the occupational structure (an aspect which has already been mentioned). Thus, an analysis has been undertaken of the patterns of behaviour of 62 occupational categories for the period 1986 and 1987 in the population groups covering the working population, the active labour force and the unemployed labour force, in order to identify the occupational categories in a process of growth, in decline or in a state of stagnation.

6.4. Among the projects with a regional scope mention must be made of the "Study of the development of the labour market in Seville and its catchment area. Employment and vocational training needs in the period 1988-1993"; its methodology goes along the general lines of the studies mentioned above and it is being conducted jointly by the Directorate-General for Employment and INEM.

6.5. As far as the design and elaboration of training programmes are concerned, INEM intends to update the training paths for 10 occupational categories, update 100 specialized occupations, and draw up 300 teaching modules.

6.6. In this context mention must be made of the vocational modules for Levels 2 and 3, which have been designed and tried out as a experiment by the Ministry of Education and Science; some of their profiles have been presented in the Reform Project. The Ministry of Education and Science has created this basic design as a training proposal which can be padded and adapted by the training centres to the characteristics of the economic and working environment.

9. OTHER PROJECTS

One of the projects which stands out as a part of the global reform of secondary and technical/vocational education, is the sociological project on "Provision of education: Evaluation of the educational system in terms of supply and demand and its possible effect on the planning of the secondary cycle", which is being conducted by a team of sociologists under the guidance of I. Fernandez de Castro. The study analyses the contribution made by training capacities in the secondary cycle to the generalization and consolidation of the demand for training in the occupational categories and the assumptions on which this demand is based; it makes a distinction between manifest and latent demand in order to achieve an evaluation of the educational system, taking as the criterion the degree of adjustment/-maladjustment between supply and demand, - expressed explicitly or remaining latent, or produced by various degrees of dissatisfaction.

10. PRIORITIES

The reform of the educational system, and especially of technical/vocational training, coincides with the internal reform of INEM as part of the National Occupational Training and Integration Plan. Both reforms directly entail a re-organization of basic and initial training and continuing training, and this obviously has repercussions on research and development in the field of vocational training and employment. In this context, reference must be made to work being done currently by groups of experts in the General Council for Vocational Training on the reform of technical/-vocational education and the National Occupational Training and Integration Plan, work which it is hoped will lead to proposals for priorities in this area. In addition to the organizations which institutionally promote research (Directorate-General for Employment, National Institute for Employment, and the Centre for Educational Research and Documentation) mention must be made of the growing role of the universities, and the development, still incipient, of research projects in the "Autonomous Communities" which are of a regional nature and where the problems of the labour market, of youth and transition to working life, long-term unemployment and the new technologies are pre-dominant.

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

WORKING MEETING
13-14 SEPTEMBER 1988

GOVERNMENT SPONSORED RESEARCH AND DEVELOPMENT INTO VOCATIONAL EDUCATION AND TRAINING IN THE UK

TRAINING COMMISSION, SHEFFIELD

CEDEFOP
BERLIN
1988

INTRODUCTION

1. The Manpower Services Commission (now called the Training Commission to reflect its new role and composition, see below) continues to be the main agency responsible for developing and managing the United Kingdom's programme of research and development into vocational education and training (VET). (1)

2. Important changes affecting the role and composition of the Commission have taken place since the last progress report, with the transfer of the public employment service ("Jobcentre") network and closely related programmes to a new comprehensive Employment Service set up as part of the Department of Employment.

FUTURE R & D PRIORITIES

3. The programme of research and development which the Commission supports is broadly designed to improve the ways in which its own VET programmes operate and are planned as well as to help industry and individuals make the best use of VET provision - and hence improve the country's competitiveness through the development of a better trained and more adaptable workforce.

4. The priorities for R & D in pursuing these goals are:

- assist with the establishment of a coherent national framework of standards-based vocational qualifications (in liaison with the National Council for Vocational Qualifications)
- establish the two-year Youth Training Scheme (YTS) as a high quality training programme which is the normal means of entry into working life of 16 and 17 year olds
- encourage industry and individuals to recognise the value of investing in training throughout working life
- help build a self-sustaining and responsive training infrastructure supported by effective local education, training and employers' organisations

- continue to improve the responsiveness of vocational education and training provision to local and national employment needs.

- identify and help industry to meet emerging and increasing key skill requirements.

FUTURE R & D PRIORITIES

5. Much of the R & D undertaken in support of these goals is development or applied research (approximately £20m in 1987/88) but often breaking new ground such as work being done to assist industry and commerce to produce and implement standards of competence in line with the remit agreed in the White Paper 'Working Together - Education and Training' (cmd 9823).

6. Research per se (approximately £5m in 1987/88) is principally concerned with evaluation of the Commission's programmes and reaching a better understanding of the context within which they operate so as to assess the extent to which objectives and value for money are being achieved. High priority is given to evaluation of all the Commission's major programmes; strengthening arrangements for the collection and use of labour market intelligence in the planning and delivery of the Commission's services; developing a more co-ordinated approach to the dissemination of research.

7. Although still a fairly small proportion of the R & D output overall, the amount of strategic research being done has increased in the last few years. A major investigation, with eleven component studies, is being carried out of the volumes, costs and funding of vocational education and training in Great Britain and the attitudes of individuals, employers and providers towards the investment they make in training. The Commission is also funding (jointly with the Education Departments and Department of Employment) national cohort studies of young people who reached minimum school leaving age in 1983/84, 1984/85 and 1985/86.

8. Details are given below of the key R & D programmes for each of the subjects designated by CEDEFOP as having main priority for the Working Group.

Transition School to Employment

9. The large programme of research which was developed to help the evaluation of YTS (2) and the Technical and Vocational Education Initiative (3) is still continuing, including the national cohort studies (4), regular follow-up of leavers, studies to examine providers' costs and benefits and case studies of good practice. Other research commissioned to assist a review which examined all aspects of two-year YTS funding has now been completed (with reports shortly due to be published).

10. With two-year YTS and the Technical Vocational Education Initiative (TVEI) now in their third and sixth year respectively, the emphasis is now on moving towards a position where all young people enter the labour market with a qualification relevant to employment. The role of YTS and TVEI in achieving that aim is to continue in conjunction with other developments affecting the 16-18 year old age group, in particular measures to encourage employers to give their 16 and 17 year old employees training.

11. One such measure announced by the Government earlier this year as part of their "Action for Cities" is the Compacts Initiative whose purpose is to encourage schools and industry to set up partnerships which will provide jobs with training (or training followed by a job) for young people leaving inner city schools. Employers and educationalists in 57 Urban Programme Areas have been invited to develop proposals to set up Compacts in their area, with a view to launching some 15 Compacts throughout Britain this year initially.

12. The Commission has also begun to work more closely with the Education System at the more skilled level, with many of the Commission's higher education (HE)activities being incorporated into the Enterprise in Higher Education (EHE) Initiative. Launched in December 1987 EHE encourages students to adopt a more enterprising approach to learning through the development of project based learning - with appropriate elements being jointly assessed by employers and college.

Training for the Long Term Unemployed

13. Most of the Commission's programmes are available to people whether they are in employment or not. However, in line with its policy of helping those who have particular difficulty in finding suitable employment, the Commission has progressively extended its programmes for those out of work, particularly the long term unemployed.

14. One major development here is the launch of Employment Training this year - a new programme offering high quality trianing for some 600,000 people a year once fully operational and designed to bring together all the Commission's existing training programmes for unemployed adults. The programme will be delivered by a network of managing agents who will either be involved as Training Managers responsible for recruitment, counselling, assessment and planning or as Training Managers organising the training itself. All trainees will be paid a training allowance equivalent to his or her benefit allowance plus an additional payment of £10 or more per training week. The emphasis will be on practical learning to help people get back into employment. A programme of evaluation of this is in the course of design but it has already been decided that the consequent labour market experience of all trainees will be surveyed.

15. A major programme of research has been completed at the University of Wales Institute of Science and Technology (UWIST) to help people in employment and out of work develop the ability to cope with the need for retraining and new job demands. One outcome of the research has been the development of training materials which are particularly useful to the long term unemployed in helping them overcome learning blockages (5).

Training for Future Skill Needs

16. Developing and managing a substantial programme of research into skills issues is a central responsibility of the Skills Unit set up in December 1986.

17 Specific research currently being undertaken in this area comprises work on:

(i) Supply and demand of highly qualified people: including a review being undertaken by the Institute of Manpower Studies (IMS) of existing data on the stocks and flows of technolgists (largely professional engineers); Information Technology Manpower Monitor also being undertaken by IMS to assess annually over 3 years the supply and demand for people with IT skills; research again being undertaken by IMS to assess whether the engineering industry faces a net loss of skills to other sectors.

(ii) Impact of developments in technology on skill needs: including research recently completed by the Science Policy Research Unit (SPRU) on the implications of introducing advanced ceramics for skills and training; work by the Centre for Urban and Regional Development (CURDS) at Newcastle University and the University of East Anglia on forecasting the rates and patterns of adoption of technological innovation.

(iii) Changing patterns of employment and work practices: including a study co-ordinated by the National Economic Development Office (NEDO) on part-time working in the retail and distribution sector; a joint project with NEDO to produce a series of 'good practice' case studies looking at how employers have coped with shortages of professional electronics staff.

(iv) Productivity and competitiveness: including work by the National Institute of Economic and Social Research (NIESR) to compare initial training provision in Britain and France in four main occupational areas: office occupations, construction trades, mechanical and electrical craftsmen and retail trades (6).

Use of Technology in Training

18. The Commission continues to fund a wide variety of initiatives to develop the use of new technology in training.

19. Recent projects in computer based training and simulation include a series of packages to train operators and maintenance staff in a major processing company how to use automatically controlled and remotely monitored installations in normal and breakdown situtations. Other projects underway include the development of courseware in retailing for both youth and adult trainees; a series of courseware packages to meet identified training needs in literacy and numeracy.

20. Work continues on the 3 year programme which was launched in April 1987 to explore and develop the potential of artificial intelligence (AI) technology to aid and enhance learning. Surveys have now been completed identifying relevant developments in AI hardware and software which have implications for training; the key people to be trained and what training is needed. Subsequent phases of the programme will build on these findings and demonstrate the use of the technology and methods to solve specific training problems (7).

Training of Trainers

21. Work is also continuing on the development and use of new technology for the training of trainers. This includes the development of a series of thirteen open learning packages covering all the main areas of training methodology designed to be used either as a complete course of study or as separate packages.

22. With the increasing emphasis on occupational competence based on workplace assessment and new vocational qualifications, the tasks and skills required by trainers themselves have changed. One major piece of research examining precisely what skills, knowledge, communication links and support are needed by training providers for the effective delivery of YTS and Employment Training is particularly relevant here (8).

23. Plans are also in hand to undertake a large scale survey into the needs of trainers in industry, commerce and the public sector identifying the numbers and types of trainers presently employed and the kind of work they do; future demand for trainers (by number and different types); extent to which future demand will be met through the existing supply (9).

Training Curriculum Development

24. The main focus in this area will be to provide support for statutory and non-statutory industry training organisations (NSTOs) to set and maintain occupational training standards which will meet the needs of the National Council for Vocational Qualifications. A number of studies have recently been undertaken for the Commission on the effectiveness of the non-statutory training organisation system (10).

25. The need for more systematic training of British managers in particular has been highlighted by two recent reports: one by Professor Charles Handy ('The Making of Managers') and the other by John Constable and Roger McCormick ('The Making of British Managers'). Following these two reports a classification of the key competences and different functions required by management has been devised. Work is currently underway to map the occurrence of these elements within existing management qualifications (11).

Other Important R & D

26. A comprehensive review of arrangements for the funding of VET in Britain has now been completed, with a series of reports shortly be be published making recommendations on how the current mechanisms for funding might be improved.

27. Other important new developments include the range of systems now in operation to improve the flow of labour market information such as the Computer Assisted Local Labour Market Information System (CALLMI) (12), the National On-Line Manpower Information System (NOMIS) (13), Training Access Points (TAPs) (14) and Local Employer Networks (LENs)(15). In addition the Commission's Local Labour Market Unit conducts and manages research into the implications of developments in the local economy (eg major construction projects such as the Channel Tunnel).

28. Development work to review the Department of Employment's Classification of Occupations and Directory of Occupational Titles (CODOT) in which the Institute of Employment Research, University of Warwick, has been engaged is now close to completion. It is intended that a new Standard Occupational Classification will take its place for all government surveys collecting occupational information.

29. Equal Opportunities and removing the obstacles which prevent people from taking part in its programmes remain high priorities for the Commission. Research mounted in this field includes a project to evaluate the range of initiatives which have been introduced to ensure that YTS is made as accessible as possible to young people with disabilities. Studies are also in hand to assess the contribution which the Commission's programmes are currently making towards helping people with literacy and numeracy problems.

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NOTES AND REFERENCES

1. Although the Commission is the main source of external funding for research and development in this field, it is not the only one: the Department of Employment, Education Departments and publicly funded external agencies (such as the National Economic Development Office and the Economic and Social Research Council) also provide funds for such work. What action might be taken to strengthen the links between the Commission and these bodies as well as the academic community is presently under consideration.

2. Since YTS became a two-year scheme in April 1986, several new features have been introduced to develop the scheme into a higher quality training programme. These include the requirement from 1 April 1988 that all YTS training providers should hold or obtain Approved Training Organisation (ATO) status and the establishment of the Training Standards Advisory Service (TSAS) providing independent advice to the Commission on the development of the programme.

3. Under the Technical and Vocational Education Initiative (TVEI) schools and colleges are encouraged to organise and manage education programmes for 14-18 year olds of all abilities so they can benefit from a more practical and relevant curriculum and be better prepared for working life. The involvement of all education authorities and individual schools and colleges remains voluntary but the Commission is hoping to see the majority of institutions participating in the Initiative over the next three years.

4. This is a major Government survey (jointly funded by the Commission, the Department of Education and Science and the Department of Employment) to monitor the decisions of young people aged 16-19 and the routes they take through education and the labour market over an extended period. By Spring 1989 three sweeps of each of three cohorts will have been undertaken. The results from the first sweep of the first cohort of young people who became eligible to leave school during 1984 have recently been published ('England and Wales Youth Cohort Study: Report on Cohort 1 Sweep 1'). The report 'Routes thorugh YTS' has also recently been published containing results from the first two sweeps of Cohort 1. More publications will follow shortly.

5. The findings of this three-year research programme have been published by the Commission in the report 'Developing Skilled Learners: Helping Adults to Become Better Learners', Sylvia Downs and Patricia Perry, R & D Series: No 40.

6. Papers on all these studies are available from the National Institute (at 2 Dean Trench Street, Smith Square, London SW1P 3HE). Further comparative studies are shortly to be carried out by the National Institute into training and productivity first in matched hotels and subsequently by examining matched food processing plants in Britain and Germany.

7. Two major publications have recently been produced by the Commission in this field: one an introduction to the potential benefits of artificial intelligence techniques ('Artificial Intelligence Applications to Training (Revised 1987)') and the other a guide to the terminology and concepts surrounding the use of new technology in training ('Information Maps: New Technology in Training (Revised 1987)').

8. This research which is being carried out by Price Waterhouse consultants involves a mapping exercise highlighting the links, good practices, current strengths and weaknesses of managing agents responsible for the delivery of

YTS and Employment Training in five contrasting local labour markets. It will also examine the support provided by the local training infrastructure in each area (including the managing agent network, Accredited Training Centres, Area Office programme staff and public advisory bodies).

9. The work is being undertaken by the Institute of Management Studies who have now completed the feasibility phase; the main study is to be mounted shortly.

10. Studies include the Institute of Manpower Study's research examining how well the NSTO system as a whole works ('The Full Fact Finding Study of the NSTO System', IMS Report No 147, Carol Varlaam); Cooper and Lybrand's evaluation of the National Priority Skills Scheme and Arthur Anderson's case studies of 42 NSTOs.

11. The research carried out by Professor Handy was based on comparative evidence drawn from the USA, West Germany, France and Japan ('The Making of Managers', NEDO 1987). Constable and McCormick examined the same theme but on evidence drawn from the UK alone ('The Making of British Managers', published by the British Institute of Management and the Confederation of British Industry, 1987.

12. The Computer Assisted Labour Market Information System (CALLMI) is now in place in all Area and Regional Offices, making it easier to use locally collected labour market and training information. A full evaluation of CALLMI is presently being undertaken to identify any improvements needed to the system and associated procedures.

13. The National On-Line Manpower Information System (NOMIS) is now available to local authorities, academics and commercial users as well as other Government departments. This system allows easy retrieval, comparison and analysis of local area statistics of population, employment, unemployment and vacancies available from national sources.

14. The purpose of this initiative is to improve access to information about education and training. Computerised Training Access Points (TAPs) placed in public libraries, community centres, Jobcentres and other easily accessible sites enable members of the public to gain direct access to information about the full range of local and national education and training opportunities.

15. As part of its commitment to improving the training infrastructure, the Commission is collaborating with the Confederation of British Industry (CBI) and the Association of British Chambers of Commerce (ABCC) on the Local Employer Networks Project which was launched in October 1986. The purpose of this initiative is to develop local networks of employers which will improve their effective involvement in the planning of VET. A full evaluation of the initiative is planned to take place shortly.

LIST OF PARTICIPANTS
TEILNEHMERLISTE
LISTE DES PARTICIPANTS

PROMOTION OF COOPERATION AMONGST RESEARCH AND DEVELOPMENT ORGANIZATIONS IN THE FIELD OF VOCATIONAL TRAINING

FOERDERUNG DER ZUSAMMENARBEIT ZWISCHEN FORSCHUNGS- UND ENTWICKLUNGSEINRICHTUNGEN AUF DEM GEBIET DER BERUFSBILDUNG

PROMOTION DE LA COOPERATION ENTRE LES ORGANISMES DE RECHERCHE ET DE DEVELOPPEMENT EN FORMATION PROFESSIONNELLE

13-14 SEPTEMBER 1988
CEDEFOP

Ms. F. ALKER
CEREQ - Centre d'Etudes et de Recherches
sur les Qualifications
9 rue Sextius Michel
F-75015 Paris

Mr. Karel BAECK   Tel.: 02/513 89 42
Rijksdienst v. Arbeidsvoorziening
Keizerslaan 7
B-1000 Bruxelles

Mr. Helmut BRUMHARD   Tel.: (0228) 21 20 76
Kuratorium der Deutschen Wirtschaft für
Berufsbildung
Buschstr. 83
D-5300 1

Mr. Pol DEBATY   Tel.: (02) 510 20 60
Office National de Emploi
ONEM
7 Boulevard de l'Empereur
B-1000 Bruxelles

Mr. Jean-Claude DUTAILLY   Tel.: (1) 45 75 62 63
CEREQ-Centre d'Etudes et de Recherches
sur les Qualifications
9 rue Sextius Michel
F-75015 Paris

Mr. Bent Brandt JENSEN Tel.: (45) 1 14 41 14
SEL - Statens Erhvervspaedagogiske
Laereruddannelse
13 Rigensgade
DK-1316 Kobenhavn K

Dr. G. KANSELAAR Tel.: (31) 30534893
Vakgroep Onderwijskunde Utrecht
Heidelberglaan 1
NL-3584 CS Utrecht

Mr. P.H. KEEN Tel.: (0742) 753275
Head of Skills Unit
Labour Market Intelligence Branch
Training Commission
Moorfoot
Sheffield S1 4PQ
GB-England

Mr. Donal KERR Tel.: 685777
FAS - The Training & Employment
Authority
Baggot Court, 27-33 Upper Baggot Street
PO Box 456
Dublin 4
Ireland

De heer A.H. KOELINK Tel.: (0031) 79 534661
Ministerie van Onderwijs en Weten-
schappen
Europaweg 4
Postbus 25 000
NL-2700 LZ Zoetermeer

Mr. Ted MATHGEN Tel.: 4000 22-1
Chambre des Metiers
Service de la Promotion de l'Artisanat
41 rue Glesener
L-1631 Luxembourg

Mr. T. MAWSON Tel.: 235 5000
Directorate-General V
Commission of the European Communities
200 Rue de la Loi
B-1049 Bruxelles

Mr. José Luis Garcia MOLINA Tel.: 4090941
Director de Programa, Subdireccion Gral.
de Formacion Profesional Ocupacional
Direccion General de Empleo
Pio Baroja 6
28071 Madrid
Spain

Mr. Michael NICOD Tel.: (0742) 753275
Head of Research Section (ER5)
Evaluation and Research Branch
Training Commission
Moorfoot
Sheffield S1 4PQ
GB-England

Mr. Theo PAPATHEODOSSIOU
ITE Tel.: 9216 603
Leoforos Syngrou 56
Athens 11742
Greece

Dr. Helmut PÜTZ Tel.: 8683-215
BIBB - Bundesinstitut für Berufsbildung
Fehrbelliner Platz 3
D-1000 Berlin 31(W)

Mr. Amin RAJAN Tel.: (0892) 26757
Holly Hill
Vauxhall Lane
Southborough
Tunbridge Wells TN4 OXD
GB-England

Dr. R.D. RYAN Tel: 614-486-3655
Executive Director
National Center for Research in
Vocational Education
Ohio State University
1960 Kenny Road
Columbus, Ohio, 43210-1090, USA

Dr. Hermann SCHMIDT Tel.: 8683-212
BIBB - Bundesinstitut für Berufsbildung
Fehrbelliner Platz 3
D-1000 Berlin 31(W)
(Friesdorfer Straße 151-153,D-5300 Bonn 2)

Mr. Luis Carlos da Silva SANTOS Tel.: 384701/6
Departamento de F. P. para o Sector
Secundario
Instituto do Emprego e Formacao Profissional
Rua de Xabregas, 52-2 o
1900 Lisboa
Portugal

Dr. Alfredo TAMBORLINI Tel.: (6) 841351
Istituto per lo Sviluppo della Formazione
professionale dei lavoratori - ISFOL
Via Bartolomeo Eustachio 8
I-00161 Roma

Mme. Anne THEUNISSEN
Confederation des Syndicats Chretiens
de Belgique
121, rue de la Loi
B-1040 Bruxelles

Mr. Gérard VALENDUC Tel.: 02/2373858
Fondation Travail-Université
Cellule Technologies et Emploi
Rue de la Loi 103
B-1040 Bruxelles

Ms. A. WESTERHUIS Tel.: (31) 73-124011
Pedagogisch Centrum Beroepsonderwijs
Bedrijfsleven, PCBB
Verwerstraat 15
Postbus 1585
NL-5200 BP's-Hertogenbosch

CEDEFOP:

E. Piehl
E. Retuerto de la Torre
C. Politi
W. McDerment